

Control Systems overview

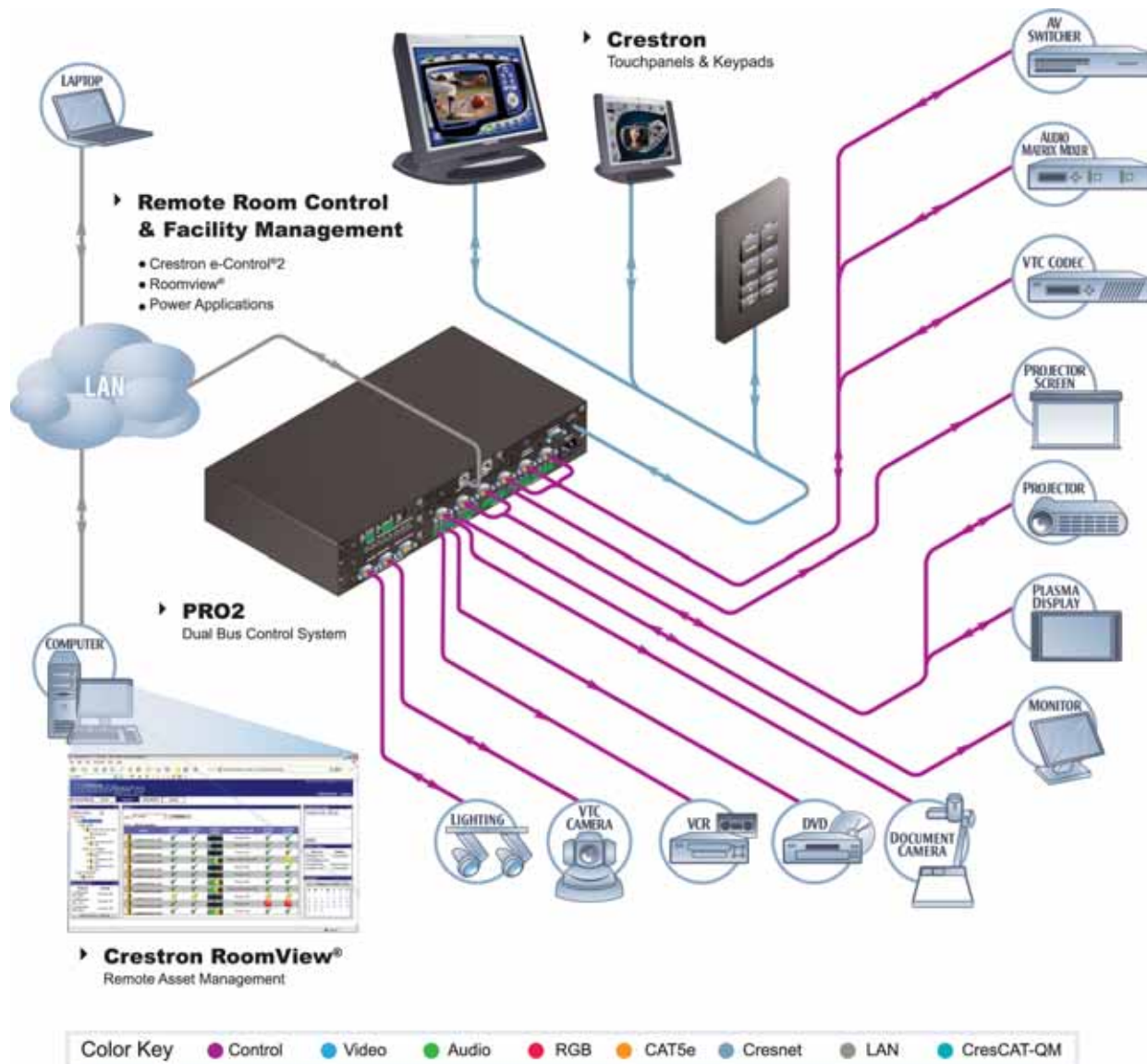
Crestron's 2-Series set the standard for control systems today, and continues to challenge the industry's expectations of what a control system should be. Control systems are the brain of a complete integrated AV and automation solution, serving as the central processor and I/O interface. Every audio, video, and environmental element of the home, boardroom, classroom, or command center becomes integrated and accessible through the control system.

No matter how complex or basic, for every application Crestron control systems are entirely custom-programmable to attain the exact functionality required. Crestron offers numerous 2-Series models, ranging from compact and

economical room boxes to full-featured, scalable systems with integrated audio/video signal routing and processing capabilities. Crestron's 2-Series provides home automation and AV system designers with a broad selection of control systems suited for every application and budget.

Crestron 2-Series control systems extend capabilities even further to enable complete control, monitoring and resource management facility-wide, campus-wide or worldwide. Before any other manufacturer, Crestron pioneered the IP-based control system to harness the vast possibilities of Ethernet and the Internet. The 2-Series was designed from the ground up to deliver the world's most advanced IP control solution available.

Typical Boardroom AV Control System Application



Control Systems cross reference

	2-Series						
	PRO2	AV2	RACK2	CP2E	CP2	MC2E	MC2W
Memory							
RAM	32MB	32MB	32MB	32MB	32MB	32MB	32MB
Non-Volatile RAM	256kB	256kB	256kB	256kB	256kB	256kB	256kB
Flash	4MB	4MB	4MB	4MB	4MB	4MB	4MB
Memory Card Slot	Up to 4GB	Up to 4GB	Up to 4GB				
Cresnet							
Cresnet Master Port	•	•	•	•	•	•	•
Cresnet Slave Capable	•	•	•	•	•	•	•
Integrated Cresnet Hub/Repeater			•				
C2N-NPA8 Support via Com Port	•	•		•	•	•	•
C2N-NPA8 Support via Ethernet	• ²	• ²	• ²	•		•	
Built-in Network Analyzer	•	•	•	•	•	•	•
Ethernet							
10/100 Ethernet Port	• ²	• ²	• ²	•		•	
e-Control 2, RoomView, & SNMP	• ²	• ²	• ²	•		•	
Network Address Translator (NAT) ²	•	•	•				
Control Ports							
Com	6 ³	6 ³	• ²	3	3	2	2
IR/Serial	8 ³	8 ³	• ²	8	8	4	4
Versiport I/O	8 ³	8 ³	• ²	8	8	4	4
Digital Input							
Low-Voltage Relay	8 ³	8 ³	• ²	8	8	4	4
Control Card Slots							
Y-Bus	3	3 ⁵	12				
Z-Bus	1	1	4				
Built-in Wireless							
1-way RF							•
IR via CNXRMIRD ⁶						•	•
Special Features							
Integrated Audio and/or Video Features							
QuickMedia Transport Technology							
Backup Processor Capable							
Power Supply							
Internal	•	•					
External			• ⁶	• ⁶	• ⁶	•	•
Mounting							
Rack Mount	2U	2U	4U	1U	1U	1U	1U
Projector Pole Mount							
Surface Mount							
CAEN Enclosure							

¹ Not included in Control System section; see appropriate catalog section for complete product information.

² Requires appropriate control card(s)

³ Additional ports are possible by adding control cards

⁴ Supports RS-232 Only

⁵ Requires CAGE2 expansion cage

⁶ Accessory sold separately

This chart intended for summary comparison only; see each product specification for complete information.

MediaManager ¹					Adagio ¹		Lighting ¹	
MP2E	MP2	QM-RMC	QM-RMCRX-BA	MPS-Series	AMS or AES	AADS	PAC2	PAC2M
32MB	32MB	32MB	32MB	32MB	32MB	32MB	32MB	32MB
256kB	256kB	256kB	256kB	256kB	256kB	256kB	256kB	256kB
4MB	4MB	4MB	4MB	16MB	8MB	8MB	4MB	8MB
							Up to 4GB	Up to 1GB
•	•		•	•	•	•	•	•
•	•		•				•	•
							•	•
•	•							
•							• ²	
•	•						•	
•		•	•	•	•	•	• ²	•
•		•	•	•	•	•	• ²	•
							•	
2	2	2 ⁴	2 ⁴	2 ⁴	2 ⁴	1 ⁴	• ²	
4	4	1	1	4	8	4	• ²	
4	4						8 ³	
		4	4	4	4			4
4	4		2	4	4		8 ³	4
							2	
							1	
•	•			•	•			
•	•		•	•	•	•		
			•	•				
							•	
				•	•	•	•	
•	•	•	•					• ⁵
1U	1U			2U	5U ⁶	4U ⁶		
			• ⁶					
			•				•	•
							•	•

PRO2 Professional Dual Bus Control System



Crestron 2-Series Control Systems are the brain of a complete integrated AV or automation solution. Every audio, video, and environmental element of the home, boardroom, classroom, or command center becomes integrated and accessible through the control system. Crestron 2-Series control systems are unmatched for power, performance and scalability, providing the ideal choice for today's demanding control applications.

The flagship PRO2 is designed for medium to large-scale commercial and residential control applications. Six built-in COM ports, eight IR/Serial ports, eight I/O Versiports, eight isolated relays, and optional Ethernet provide the essential interface for control of numerous devices including video projectors, plasma displays, switchers, DVD players, screens, lifts, and much more. The PRO2 features a built-in power supply, with power available to support external Cresnet devices including touchpanels, keypads and expansion modules.

2-Series Engine—At the heart of the PRO2 is the powerful 32-bit Freescale ColdFire® processor. Crestron's exclusive enhanced real-time operating system makes the PRO2 the fastest, most reliable control system available.

Dual Bus Architecture—The PRO2's unique dual-bus architecture affords ultra fast communications. The 40Mbps Y-Bus provides a high-speed backplane for IR, serial, and other integrated control ports. Additional control ports and interfaces like MIDI and digital audio processing may be added by installing up to three Y-Bus control cards. At a blazing 300Mbps, the Z-Bus supports Fast Ethernet with future support for other emerging technologies.

Cresnet®—Cresnet is the communications backbone for many Crestron touchpanels, keypads, lighting controls, and other devices. The Cresnet bus is a simple, yet flexible 4-wire network that provides rock-solid bidirectional communication and power for up to 252 Cresnet devices.

Cresnet Slave Mode—Selectable Cresnet Slave Mode enables the PRO2 to be configured as a Cresnet slave device, effectively transforming it into a Cresnet expansion module. Such flexibility can offer a cost-effective solution for system expansion, providing a host of additional control ports in a single module.

Ethernet—Crestron pioneered the IP-based control system to harness the vast possibilities of Ethernet and the Internet for remote control, monitoring, programming, and diagnostics, and the PRO2 is designed to deliver the world's most advanced IP control solution. A choice of single or dual port Ethernet cards enables a full-duplex 10/100 Ethernet connection with built-in Web server and email client, and support for both static and dynamic IP addressing.

e-Control®2—Crestron's award-winning e-Control 2 XPanel solutions offer the most flexible range of IP control possibilities available. Using a Windows® computer or CE/PocketPC™ PDA device, e-Control 2 provides an amazing control GUI that looks and behaves just like a Crestron Isys® touchpanel.

RoomView®—Every Ethernet-enabled 2-Series control system works directly with Crestron's exclusive RoomView Help Desk software for the industry's most comprehensive facility-wide asset management solution.

SNMP—Built-in SNMP support enables network management of Crestron control systems using third-party SNMP software. As an alternate or supplement to RoomView, SNMP allows full control and monitoring from the IT Help Desk or NOC in a format that's familiar to IT personnel.

SSL—All Ethernet-enabled 2-Series control systems support SSL (Secure Sockets Layer), the industry standard for protecting sensitive network communications.

NAT—The PRO2's onboard NAT (Network Address Translator) acts as a firewall and router to facilitate the configuration of a private control LAN with a single-point connection to the client's LAN (Dual-port Ethernet card required).

Professional Dual Bus Control System **PRO2**

Memory Expansion—A memory card slot accessible on the rear panel allows for easy expansion of the PRO2's internal memory using any Type II Compact Flash memory card up to 4 GB.

Front Panel Control—The PRO2 includes a programmable front control panel with LCD display and control port status indicators. The PRO2's front panel serves as a ready user interface for system configuration and diagnostics, and can also be custom programmed to enable menu-driven control capability.

- ▶ 2-Series engine | Dual-bus architecture
- ▶ 4GB Compact Flash memory card slot
- ▶ Cresnet port - master/slave selectable
- ▶ 10/100 Ethernet capable | SSL encryption
- ▶ e-Control 2 and RoomView enabled
- ▶ SNMP support | Built-in firewall, NAT and router
- ▶ 6 Com ports, 8 IR/serial ports, 8 Versiport I/O ports, 8 Relay ports
- ▶ 3 Y-Bus / 1 Z-Bus control card expansion slots
- ▶ Internal power supply | 2-Space EIA rack-mountable
- ▶ Front control panel with LCD display

SPECIFICATIONS

Processor

CPU: 32-bit Freescale ColdFire® Microprocessor

Memory

SDRAM: 32 MB

NVRAM: 256 KB

Flash: 4 MB

Compact Flash: expandable up to 4 GB (not included)

Operating System

Real-time, preemptive multi-threaded/multitasking kernel; FAT32 file system with long names; supports SIMPL™ Windows® and SIMPL+®

Ethernet

With C2ENET-1: 10/100BaseT, auto-negotiating, full/half duplex, static IP or DHCP/DNS, SSL, TCP/IP, UDP/IP, CIP, SMTP, SNMP, built-in Web server and e-mail client; supports Crestron e-Control®2 XPanel and RoomView™ applications

With C2ENET-2: All above features plus: built-in firewall, router, and network address translator (NAT)

Connectors and Expansion Slots

Y-Bus: 40 Mb/s parallel communications

Backplane for integrated control ports and Y-Bus expansion slots

COM A - F: (6) DB9 male

Bidirectional RS-232/422/485 ports

Up to 115.2k baud

Hardware and software handshaking support

Ports C-F support C2N-NPA8 Network Poll Accelerator

INFRARED-SERIAL OUTPUT A - H: (8) 2-pin 3.5mm detachable terminal blocks, IR/Serial output ports;

IR output up to 1.2 MHz

1-way serial TTL/RS-232 (0-5 Volts) up to 115.2k baud

Individual signal generator per port allowing simultaneous firing of all ports

I/O Versiports 1 - 8: (1) 9-pin 3.5mm detachable terminal block comprising (8) digital input/output or analog input ports (referenced to GND);

Digital Input: Rated for 0-24 Volts DC, input impedance 20k ohms, logic threshold 1.24 Volts DC;

Digital Output: 250 mA sync from maximum 24 Volts DC, catch diodes for use with "real world" loads;

Analog Input: Rated for 0-10 Volts DC, protected to 24 Volts DC maximum, input impedance 20k ohms;

Programmable 5 Volts, 2k ohms pull-up resistor per pin

RELAY OUTPUT 1 - 8: (2) 8-pin 3.5mm detachable terminal blocks comprising (8) normally open, isolated relays;

Rated 1 Amp, 30 Volts AC/DC

MOV arc suppression across contacts

Expansion Slots: (3) Y-Bus expansion slots

Accept all Y-Bus control cards

Z-Bus: 300 Mb/s parallel communications

Backplane for Z-Bus expansion slots

Expansion Slot: (1) Z-Bus expansion slot

Accepts all Z-Bus control cards

COMPUTER: (2) DB9 female

Front and rear panel RS-232 computer console ports

NET: (1) 4-pin 5mm detachable terminal block

Cresnet port, Master/Slave selectable

Expandable via C2N-NPA8 Network Poll Accelerator

100-250V ~ 2.3A: (1) IEC Socket

Mates with removable power cord, included

Ground: (1) 6-32 screw, chassis ground lug

Reset Buttons

HW-R: Hardware reset (reboots the control system)

SW-R: Software reset (restarts the SIMPL program)

Menu Buttons

FUNCTIONS: (6) Up to 6 dynamically assigned functions based upon current menu

MENU: (1) Returns the LCD display to the MAIN menu

▲, ▼: (2) Scroll up or down through any list displayed in the LCD display

BKLT: (1) Toggles through 4 levels of backlight intensity for the LCD display

Refer to the Operations Guide for additional menu functions

Display

Reverse mode (yellow and black) LCD back light

(2) lines, (40) characters per line

Displays system information, configuration menus, and custom programmable user functions

> continued

CONTROL SYSTEMS

► 2-Series Control Systems

PRO2 Professional Dual Bus Control System (continued)

LED Indicators

PWR: (1 green) Indicates AC power supplied to unit

NET: (1 yellow) Indicates Cresnet bus activity

MSG: (1 red) Indicates control system has generated an error message

LNK A: (1 red) Indicates a valid connection on LAN port A

ACT A: (1 red) Indicates activity on LAN port A

LNK B: (1 red) Indicates a valid connection on LAN port B

ACT B: (1 red) Indicates activity on LAN port B

COM A - F (TXD, RXD, RTS, CTS): (24 red) Indicate activity on each respective COM port

IR-SERIAL A - H: (8 red) Indicate activity on each respective IR/Serial port

INPUT-OUTPUT 1 - 8: (8 red) Indicate activity on each respective I/O Versiport

RELAY 1 - 8: (8 red) Indicate contact closure at each respective relay port

SLOT 1 - 3: (3 red) Illuminates to indicate presence of a card in the respective expansion slot; extinguishes momentarily to indicate activity

Power Requirements

Internal Universal Power Supply: 2.3 Amps, 100-250 Volts AC, 50/60 Hz

Available Cresnet Power: 50 Watts (shared with control card expansion slots)

Environmental

Temperature: 41° to 113°F (5° to 45°C)

Humidity: 10% to 90% RH (non-condensing)

Enclosure

Black metal, 2U 19" rack-mountable (rack ears included)

Dimensions

Height: 3.56 in (9.04 cm), 3.47 (8.81 cm) without feet

Width: 17.03 in (43.26 cm), 19.0 in (48.26 cm) with ears

Depth: 10.36 in (26.31 cm)

Weight

8.0 lb (3.62 kg) – with line cord



Rear View - Shown with optional control cards installed

AVAILABLE ACCESSORIES

- | | | | |
|---|--|--|---------------------------|
| ► Y-Bus Control Cards
(Refer to "Control Cards" section for more information) | ► C2N-HBLOCK
Cresnet Network
Distribution Block | ► C2N-SPWS300
300 Watt Cresnet
Power Supply | ► IRP2
IR Probe |
| ► Z-Bus Control Cards
(Refer to "Control Cards" section for more information) | ► C2N-NPA8
Cresnet Network
Poll Accelerator | ► CNSP-XX
Custom Serial
Interface Cable | |

CONTROL SYSTEMS

► 2-Series Control Systems

Economical Dual Bus Control System **AV2**

Crestron 2-Series Control Systems are the brain of a complete integrated AV or automation solution. Every audio, video, and environmental element of the home, boardroom, classroom, or command center becomes integrated and accessible through the control system. Crestron 2-Series control systems are unmatched for power, performance and scalability, providing the ideal choice for today's demanding control applications.

The AV2 is designed for medium to large-scale commercial and residential control applications. Six built-in COM ports, eight IR/Serial ports, eight I/O Versiports, eight isolated relays, and optional Ethernet provide the essential interface for control of numerous devices including video projectors, plasma displays, switchers, DVD players, screens, lifts, and much more. The AV2 features a built-in power supply, with power available to support external Cresnet devices including touchpanels, keypads and expansion modules.

2-Series Engine—At the heart of the AV2 is the powerful 32-bit Freescale ColdFire® processor. Crestron's exclusive enhanced real-time operating system makes the AV2 the fastest, most reliable control system available.

Dual Bus Architecture—The AV2's unique dual-bus architecture affords ultra fast communications. The 40Mbps Y-Bus provides a high-speed backplane for IR, serial, and other integrated control ports. Additional control ports and interfaces like MIDI and digital audio processing may be added by installing up to three Y-Bus control cards (expansion cage option required). At a blazing 300Mbps, the Z-Bus supports Fast Ethernet with future support for other emerging technologies.

Cresnet®—Cresnet is the communications backbone for many Crestron touchpanels, keypads, lighting controls, and other devices. The Cresnet bus is a simple, yet flexible 4-wire network that provides rock-solid bidirectional communication and power for up to 252 Cresnet devices.

Cresnet Slave Mode—Selectable Cresnet Slave Mode enables the AV2 to be configured as a Cresnet slave device, effectively transforming it into a Cresnet expansion module. Such flexibility can offer a cost-effective solution for system expansion, providing a host of additional control ports in a single module.

Ethernet—Crestron pioneered the IP-based control system to harness the vast possibilities of Ethernet and the Internet for remote control, monitoring, programming, and



diagnostics, and the AV2 is designed to deliver the world's most advanced IP control solution. A choice of single or dual port Ethernet cards enables a full-duplex 10/100 Ethernet connection with built-in Web server and email client, and support for both static and dynamic IP addressing.

e-Control®2—Crestron's award-winning e-Control 2 XPanel solutions offer the most flexible range of IP control possibilities available. Using a Windows® computer or CE/PocketPC™ PDA device, e-Control 2 provides an amazing control GUI that looks and behaves just like a Crestron Isys® touchpanel.

RoomView®—Every Ethernet-enabled 2-Series control system works directly with Crestron's exclusive RoomView Help Desk software for the industry's most comprehensive facility-wide asset management solution.

SNMP—Built-in SNMP support enables network management of Crestron control systems using third-party SNMP software. As an alternate or supplement to RoomView, SNMP allows full control and monitoring from the IT Help Desk or NOC in a format that's familiar to IT personnel.

SSL—All Ethernet-enabled 2-Series control systems support SSL (Secure Sockets Layer), the industry standard for protecting sensitive network communications.

NAT—The AV2's onboard NAT (Network Address Translator) acts as a firewall and router to facilitate the configuration of a private control LAN with a single-point connection to the client's LAN (Dual-port Ethernet card required).

Memory Expansion—A memory card slot accessible on the rear panel allows for easy expansion of the AV2's internal memory using any Type II Compact Flash memory card up to 4 GB.

> continued

AV2 Economical Dual Bus Control System (continued)

- ▶ 2-Series engine | Dual-bus architecture
- ▶ 4GB Compact Flash memory card slot
- ▶ Cresnet port - master/slave selectable
- ▶ 10/100 Ethernet capable | SSL encryption
- ▶ e-Control 2 and RoomView enabled
- ▶ SNMP support | Built-in firewall, NAT and router
- ▶ 6 Com ports, 8 IR/serial ports, 8 Versiport I/O ports, 8 Relay ports
- ▶ 3 Y-Bus / 1 Z-Bus control card expansion slots
- ▶ Internal power supply | 2-Space EIA rack-mountable

SPECIFICATIONS

Processor

CPU: 32-bit Freescale ColdFire® Microprocessor

Memory

SDRAM: 32 MB

NVRAM: 256 KB

Flash: 4 MB

Compact Flash: expandable up to 4 GB (not included)

Operating System

Real-time, preemptive multi-threaded/multitasking kernel; FAT32 file system with long names; supports SIMPL™ Windows® and SIMPL+®

Ethernet

With C2ENET-1: 10/100BaseT, auto-negotiating, full/half duplex, static IP or DHCP/DNS, SSL, TCP/IP, UDP/IP, CIP, SMTP, SNMP, built-in Web server and e-mail client; supports Crestron e-Control®2 XPanel and RoomView™ applications

With C2ENET-2: All above features plus: built-in firewall, router, and network address translator (NAT)

Connectors and Expansion Slots

Y-Bus: 40 Mb/s parallel communications
Backplane for integrated control ports and Y-Bus expansion slots

COM A - F: (6) DB9 male
Bidirectional RS-232/422/485 ports
Up to 115.2k baud
Hardware and software handshaking support
Ports C-F support C2N-NPA8 Network Poll Accelerator

INFRARED-SERIAL OUTPUT A - H: (8) 2-pin 3.5mm detachable terminal blocks, IR/Serial output ports;
IR output up to 1.2 MHz
1-way serial TTL/RS-232 (0-5 Volts) up to 115.2k baud
Individual signal generator per port allowing simultaneous firing of all ports

I/O Versiports 1 - 8: (1) 9-pin 3.5mm detachable terminal block comprising (8) digital input/output or analog input ports (referenced to GND);

Digital Input: Rated for 0-24 Volts DC, input impedance 20k ohms, logic threshold 1.24 Volts DC;
Digital Output: 250 mA sync from maximum 24 Volts DC, catch diodes for use with "real world" loads;
Analog Input: Rated for 0-10 Volts DC, protected to 24 Volts DC maximum, input impedance 20k ohms;
Programmable 5 Volts, 2k ohms pull-up resistor per pin

RELAY OUTPUT 1 - 8: (2) 8-pin 3.5mm detachable terminal blocks comprising (8) normally open, isolated relays;
Rated 1 Amp, 30 Volts AC/DC
MOV arc suppression across contacts

Expansion Slots: (3) Y-Bus expansion slots
(Requires CAGE2 accessory, sold separately)
Accept all Y-Bus control cards

Z-Bus: 300 Mb/s parallel communications
Backplane for Z-Bus expansion slots

Expansion Slot: (1) Z-Bus expansion slot
Accepts all Z-Bus control cards

COMPUTER: (2) DB9 female
Front and rear panel RS-232 computer console ports

NET: (1) 4-pin 5mm detachable terminal block
Cresnet port, Master/Slave selectable
Expandable via C2N-NPA8 Network Poll Accelerator

100-250V ~ 2.3A: (1) IEC Socket
Mates with removable power cord, included

Ground: (1) 6-32 screw, chassis ground lug

Reset Buttons

HW-R: Hardware reset (reboots the control system)
SW-R: Software reset (restarts the SIMPL program)

LED Indicators

PWR: (1 green) Indicated AC power supplied to unit
NET: (1 yellow) Indicates Cresnet bus activity
MSG: (1 red) Indicates control system has generated an error message
LNK A: (1 red) Indicates a valid connection on LAN port A
ACT A: (1 red) Indicates activity on LAN port A
LNK B: (1 red) Indicates a valid connection on LAN port B
ACT B: (1 red) Indicates activity on LAN port B

Power Requirements

Internal Universal Power Supply: 2.3 Amps, 100-250 Volts AC, 50/60 Hz

Available Cresnet Power: 50 Watts (shared with control card expansion slots)

Environmental

Temperature: 41° to 113°F (5° to 45°C)
Humidity: 10% to 90% RH (non-condensing)

Enclosure

Black metal, 2U 19" rack-mountable (rack ears included)

Dimensions

Height: 3.56 in (9.04 cm), 3.47 (8.81 cm) without feet
Width: 17.03 in (43.26 cm), 19.0 in (48.26 cm) with ears
Depth: 10.31 in (26.19 cm)

Weight

7.1 lb (3.22 kg) – with line cord



Rear View - Shown with optional CAGE2 accessory and control cards installed

AVAILABLE ACCESSORIES

- | | | | |
|--|--|---|---|
| ▶ CAGE2
3-Card Expansion Cage
for AV2 Control System | ▶ Z-Bus Control Cards
(Refer to "Control Cards"
section for more information) | ▶ C2N-NPA8
Cresnet Network Poll Accelerator | ▶ CNSP-XX
Custom Serial Interface Cable |
| ▶ Y-Bus Control Cards
(Refer to "Control Cards"
section for more information) | ▶ C2N-HBLOCK
Cresnet Network
Distribution Block | ▶ C2N-SPWS300
300 Watt Cresnet Power Supply | ▶ IRP2
IR Probe |

RACK2 Dual Bus Control System with Card Frame



Crestron 2-Series Control Systems are the brain of a complete integrated AV or automation solution. Every audio, video, and environmental element of the home, boardroom, classroom, or command center becomes integrated and accessible through the control system. Crestron 2-Series control systems are unmatched for power, performance and scalability, providing the ideal choice for today's demanding control applications.

The RACK2 is designed for large-scale commercial and residential applications requiring maximum options for customization and scalability. It provides an integrated 12-slot Y-Bus card cage that supports any combination of plug-in Y-Bus control cards for IR, RS-232/422/485, relay, digital I/O, analog I/O, digital audio processing, and MIDI. The integrated 4-slot Z-Bus card cage is designed for Crestron's high-speed single and dual-port Ethernet cards.

2-Series Engine—At the heart of the RACK2 is the powerful 32-bit Freescale ColdFire® processor. Crestron's exclusive enhanced real-time operating system makes the RACK2 the fastest, most reliable control system available.

Dual Bus Architecture—The RACK2's unique dual-bus architecture affords ultra fast communications. The 40Mbps Y-Bus provides a high-speed backplane for IR, serial, and other control ports via the 12 Y-Bus control card slots. At a blazing 300Mbps, the Z-Bus supports Fast Ethernet with future support for other emerging technologies via the 4 Z-Bus slots.

Built-in Cresnet® Hub—The Cresnet bus is a simple, yet flexible 4-wire network that provides rock-solid bidirectional communication and power for many Crestron touchpanels, keypads, lighting controls, and other devices. The RACK2's built-in Cresnet hub serves as a repeater, splitter, and wiring

block for large Cresnet networks. Each of its eight ports (or segments) has a dedicated driver/receiver, allowing every port to support up to 5000 feet of Cresnet cabling and up to 20 touchpanels and other high-traffic Cresnet devices.

Cresnet Slave Mode—Selectable Cresnet Slave Mode enables the RACK2 to be configured as a Cresnet slave device, effectively transforming it into a Cresnet expansion module. Such flexibility can offer a cost-effective solution for system expansion, providing a host of additional control ports in a single card cage.

Ethernet—Crestron pioneered the IP-based control system to harness the vast possibilities of Ethernet and the Internet for remote control, monitoring, programming, and diagnostics, and the RACK2 is designed to deliver the world's most advanced IP control solution. A choice of single or dual port Ethernet cards enables a full-duplex 10/100 Ethernet connection with built-in Web server and email client, and support for both static and dynamic IP addressing.

e-Control® 2—Crestron's award-winning e-Control 2 XPanel solutions offer the most flexible range of IP control possibilities available. Using a Windows® computer or CE/PocketPC™ PDA device, e-Control 2 provides an amazing control GUI that looks and behaves just like a Crestron Isys® touchpanel.

RoomView®—Every Ethernet-enabled 2-Series control system works directly with Crestron's exclusive RoomView Help Desk software for the industry's most comprehensive facility-wide asset management solution.

SNMP—Built-in SNMP support enables network management of Crestron control systems using third-party SNMP software. As an alternate or supplement to RoomView, SNMP allows full control and monitoring from the IT Help Desk or NOC in a format that's familiar to IT personnel.

SSL—All Ethernet-enabled 2-Series control systems support SSL (Secure Sockets Layer), the industry standard for protecting sensitive network communications.

NAT—The RACK2's onboard NAT (Network Address Translator) acts as a firewall and router to facilitate the configuration of a private control LAN with a single-point connection to the client's LAN (Dual-port Ethernet card required).

Memory Expansion—A memory card slot accessible on the rear panel allows for easy expansion of the RACK2's internal memory using any Type II Compact Flash memory card up to 4 GB.

Dual Bus Control System with Card Frame **RACK2**

Front Panel Control—The RACK2 includes a programmable front control panel with LCD display and card slot status indicators. The RACK2's front panel serves as a ready user interface for system configuration and diagnostics, and can also be custom programmed to enable menu-driven control capability.

Field-Replaceable CPU—To minimize downtime in the event of a fatal processor failure, the RACK2 is designed with a field-replaceable CPU card that is easily accessible from the rear panel.

- [2-Series engine](#) | [Dual-bus architecture](#)
- [4GB Compact Flash memory card slot](#)
- [Cresnet port - master/slave selectable](#)
- [Integrated Cresnet hub/repeater](#)
- [10/100 Ethernet capable](#) | [SSL encryption](#)
- [e-Control 2 and RoomView enabled](#)
- [SNMP support](#) | [Built-in firewall, NAT and router](#)
- [12 Y-Bus control card expansion slots](#)
- [4 Z-Bus control card expansion slots](#)
- [4-space EIA rack-mountable](#)
- [Front control panel with LCD display](#)

SPECIFICATIONS

Processor

CPU: 32-bit Freescale ColdFire® Microprocessor

Memory

SDRAM: 32 MB

NVRAM: 256 KB

Flash: 4 MB

Compact Flash: expandable up to 4 GB (not included)

Operating System

Real-time, preemptive multi-threaded/multitasking kernel; FAT32 file system with long names; supports SIMPL™ Windows® and SIMPL+®

Ethernet

With C2ENET-1: 10/100BaseT, auto-negotiating, full/half duplex, static IP or DHCP/DNS, SSL, TCP/IP, UDP/IP, CIP, SMTP, SNMP, built-in Web server and e-mail client; supports Crestron e-Control®2 XPanel and RoomView™ applications

With C2ENET-2: All above features plus: built-in firewall, router, and network address translator (NAT)

Connectors and Expansion Slots

Y-Bus Expansion Slots: (12) Y-Bus expansion slots
40 Mb/s parallel communications internal backplane
Accept all Y-Bus control cards

Z-Bus Expansion Slots: (4) Z-Bus expansion slots
300 Mb/s parallel communications internal backplane
Accepts all Z-Bus control cards

COMPUTER: (2) DB9 female

Front and rear panel RS-232 computer console ports

NET: (1) 4-pin 5mm detachable terminal block

Cresnet port, Master/Slave selectable

Expandable via C2N-NPA8 Network Poll Accelerator

NET A - H: (8) 4-pin 3.5mm detachable terminal blocks

Cresnet hub/repeater ports

PWR: (2) 3-pin 3.5mm detachable terminal blocks

Cresnet internal/external power connectors/selectors

G: (1) 6-32 screw, chassis ground lug

Reset Buttons

HW-R: Hardware reset (reboots the control system)

SW-R: Software reset (restarts the SIMPL program)

Menu Buttons

FUNCTIONS: (6) Up to 6 dynamically assigned functions based upon current menu

MENU: (1) Returns the LCD display to the MAIN menu

▲, ▼: (2) Scroll up or down through any list displayed in the LCD display

BKLT: (1) Toggles through 4 levels of backlight intensity for the LCD display

Refer to the Operations Guide for additional menu functions

Display

Reverse mode (yellow and black) LCD back light

(2) lines, (40) characters per line

Displays system information, configuration menus, and custom programmable user functions

LED Indicators

PWR: (1 green) Indicates DC power supplied to unit

NET: (1 yellow) Indicates Cresnet bus activity

MSG: (1 red) Indicates control system has generated an error message

LNK A: (1 red) Indicates a valid connection on LAN port A

ACT A: (1 red) Indicates activity on LAN port A

LNK B: (1 red) Indicates a valid connection on LAN port B

ACT B: (1 red) Indicates activity on LAN port B

SLOT 1 - 16: (16 red) Illuminates to indicate presence of a card in the respective expansion slot; extinguishes momentarily to indicate activity

Hub Ports A - H (rear): (8 red) Indicate Cresnet activity coming from any device on a given network segment

Hub PWR (rear): (2 green) Indicate presence of Cresnet power at ports A-D and E-H

Power Requirements

Cresnet Power Usage: 12 Watts (0.5 Amps @ 24 Volts DC) with no control cards installed;

External Cresnet power supply required

> continued

CONTROL SYSTEMS

► 2-Series Control Systems

RACK2 Dual Bus Control System with Card Frame (continued)

Environmental

Temperature: 41° to 113°F (5° to 45°C)

Humidity: 10% to 90% RH (non-condensing)

Enclosure

Black metal, 4U 19" rack-mountable (rack ears included)

Dimensions

Height: 3.97 (17.71 cm)

Width: 17.03 in (43.26 cm), 19.0 in (48.26 cm) with ears

Depth: 9.17 in (23.27 cm)

Weight

9.5 lbs (4.3 kg)



Rear View - Shown with optional control cards installed

AVAILABLE ACCESSORIES

- | | | | |
|--|--|--|--|
| ► Y-Bus Control Cards
(Refer to "Control Cards"
section for more information) | ► CNPWS-75
75 Watt Cresnet
Power Supply | ► C2N-NPA8
Cresnet Network
Poll Accelerator | ► C2N-HBLOCK
Cresnet Network
Distribution Block |
| ► Z-Bus Control Cards
(Refer to "Control Cards"
section for more information) | ► C2N-SPWS300
300 Watt Cresnet
Power Supply | | |

CONTROL SYSTEMS

► 2-Series Control Systems

Compact Control System with Ethernet **CP2E**

Crestron 2-Series Control Systems are the brain of a complete integrated AV or automation solution. Every audio, video, and environmental element of the home, boardroom, classroom, or command center becomes integrated and accessible through the control system. Crestron 2-Series control systems are unmatched for power, performance and scalability, providing the ideal choice for today's demanding control applications.

The CP2E is a compact Ethernet control system designed for small to medium sized residential and commercial control applications. Three built-in COM ports, eight IR/Serial ports, eight I/O Versiports, eight isolated relays, and Ethernet provide for control of video projectors, plasma displays, switchers, DVD players, screens, lifts, and much more. Additional control ports may be added using Cresnet expansion modules, or by "slaving" additional control processors such as the CP2.

2-Series Engine—At the heart of the CP2E is the powerful 32-bit Freescale ColdFire® processor. Crestron's exclusive enhanced real-time operating system makes the CP2E the fastest, most reliable control system available.

Cresnet®—Cresnet is the communications backbone for many Crestron touchpanels, keypads, lighting controls, and other devices. The Cresnet bus is a simple, yet flexible 4-wire network that provides rock-solid bidirectional communication for numerous Cresnet devices.

Cresnet Slave Mode—Selectable Cresnet Slave Mode enables the CP2E to be configured as a Cresnet slave device, effectively transforming it into a Cresnet expansion module. Such flexibility can offer a cost-effective solution for system expansion, providing a host of additional control ports in a single module.

Ethernet—Crestron pioneered the IP-based control system to harness the vast possibilities of Ethernet and the Internet for remote control, monitoring, programming, and diagnostics. The CP2E is designed to deliver the world's most advanced IP control solution with full-duplex 10/100 Ethernet, built-in Web server and email client, and support for both static and dynamic IP addressing.

e-Control®2—Crestron's award-winning e-Control 2 XPanel solutions offer the most flexible range of IP control possibilities available. Using a Windows® computer or CE/PocketPC™ PDA device, e-Control 2 provides an amazing control GUI that looks and behaves just like a Crestron Isys® touchpanel.



RoomView®—Every Ethernet-enabled 2-Series control system works directly with Crestron's exclusive RoomView Help Desk software for the industry's most comprehensive facility-wide asset management solution.

SNMP—Built-in SNMP support enables network management of Crestron control systems using third-party SNMP software. As an alternate or supplement to RoomView, SNMP allows full control and monitoring from the IT Help Desk or NOC in a format that's familiar to IT personnel.

SSL—All Ethernet-enabled 2-Series control systems support SSL (Secure Sockets Layer), the industry standard for protecting sensitive network communications.

- 2-Series engine | Dual-bus architecture
- Cresnet port - master/slave selectable
- 10/100 Ethernet | SSL encryption
- e-Control 2 and RoomView enabled | SNMP support
- 3 Com ports (RS-232/422/485)
- 8 IR/serial ports
- 8 Versiport I/O ports
- 8 Low-voltage relay ports
- Single-space EIA rack-mountable

SPECIFICATIONS

Processor

CPU: 32-bit Freescale ColdFire® Microprocessor

Memory

SDRAM: 32 MB

NVRAM: 256 KB

Flash: 4 MB

Operating System

Real-time, preemptive multi-threaded/multitasking kernel; FAT32 file system with long names; supports SIMPL™ Windows® and SIMPL+®

> continued

CP2E Compact Control System with Ethernet (continued)

Ethernet

10/100BaseT, auto-negotiating, full/half duplex, static IP or DHCP/DNS, SSL, TCP/IP, UDP/IP, CIP, SMTP, SNMP, built-in Web server and e-mail client; supports Crestron e-Control[®]2 XPanel and RoomView[™] applications

Connectors

COM A - C: (3) DB9 male, bidirectional RS-232/422/485 ports Up to 115.2k baud; hardware and software handshaking support All ports support C2N-NPA8 Network Poll Accelerator

INFRARED-SERIAL OUTPUT A - H: (8) 2-pin 3.5mm detachable terminal blocks, IR/Serial output ports; IR output up to 1.2 MHz 1-way serial TTL/RS-232 (0-5 Volts) up to 115.2k baud Individual signal generator per port allowing simultaneous firing of all ports

I/O Versiports 1 - 8: (1) 9-pin 3.5mm detachable terminal block comprising (8) digital input/output or analog input ports (referenced to GND);

Digital Input: Rated for 0-24 Volts DC, input impedance 20k ohms, logic threshold 1.24 Volts DC;

Digital Output: 250 mA sync from maximum 24 Volts DC, catch diodes for use with "real world" loads;

Analog Input: Rated for 0-10 Volts DC, protected to 24 Volts DC maximum, input impedance 20k ohms;

Programmable 5 Volts, 2k ohms pull-up resistor per pin

RELAY OUTPUT 1 - 8: (2) 8-pin 3.5mm detachable terminal blocks Comprise (8) normally open, isolated relays Rated 1 Amp, 30 Volts AC/DC MOV arc suppression across contacts

LAN: (1) 8-wire RJ45 with 2 LED indicators

10/100BaseT Ethernet port

Green LED indicates link status

Yellow LED indicates Ethernet activity

COMPUTER: (1) DB9 female, RS-232 computer console port

NET: (1) 4-pin 5mm detachable terminal block

Cresnet port, Master/Slave selectable

Expandable via C2N-NPA8 Network Poll Accelerator

24VDC: (1) 2.1 mm barrel DC power jack, 24 Volt DC power input (PW-2420RU power supply sold separately)

Passes through to NET port to power Cresnet devices

Reset Buttons

HW-R: Hardware reset (reboots the control system)

SW-R: Software reset (restarts the SIMPL program)

LED Indicators

PWR: (1 green) Indicates DC power supplied to unit

NET: (1 yellow) Indicates Cresnet bus activity

MSG: (1 red) Indicates control system has generated an error message

LNK: (1 red) Indicates a valid connection on LAN port

ACT: (1 red) Indicates activity on LAN port

Power Requirements

24 Watts (1 Amp) @ 24 Volts DC

(PW-2420RU power supply sold separately)

Available Cresnet Power: 26 Watts using PW-2420RU

Cresnet Power Usage: 24 Watts (1 Amp @ 24 Volts DC) with no power supply connected to the 24VDC connector

Environmental

Temperature: 41° to 113°F (5° to 45°C)

Humidity: 10% to 90% RH (non-condensing)

Enclosure

Black metal, 1U 19" rack-mountable (rack ears included)

Dimensions

Height: 1.80 in (4.57 cm), 1.70 in (4.32 cm) without feet

Width: 17.03 in (43.24 cm), 19.0 in (48.26 cm) with ears

Depth: 6.66 in (16.91 cm)

Weight

3.54 lbs (1.61 kg)



Rear View

AVAILABLE ACCESSORIES

► PW-2420RU

50 Watt Regulated
Universal Power Supply

► C2N-HBLOCK

Cresnet Network
Distribution Block

► CNSP-XX

Custom Serial Interface Cable

► IRP2

IR Probe

Compact Control System **CP2**

Crestron 2-Series Control Systems are the brain of a complete integrated AV or automation solution. Every audio, video, and environmental element of the home, boardroom, classroom, or command center becomes integrated and accessible through the control system. Crestron 2-Series control systems are unmatched for power, performance and scalability, providing the ideal choice for today's demanding control applications.

The CP2 is a compact control system designed for small to medium sized residential and commercial control applications. Three built-in COM ports, eight IR/Serial ports, eight I/O Versiports, and eight isolated relays provide for control of video projectors, plasma displays, switchers, DVD players, screens, lifts, and much more. Additional control ports may be added using Cresnet expansion modules, or by "slaving" an additional CP2 or other control processor.

2-Series Engine—At the heart of the CP2 is the powerful 32-bit Freescale ColdFire® processor. Crestron's exclusive enhanced real-time operating system makes the CP2 the fastest, most reliable control system available.

Cresnet®—Cresnet is the communications backbone for many Crestron touchpanels, keypads, lighting controls, and other devices. The Cresnet bus is a simple, yet flexible 4-wire network that provides rock-solid bidirectional communication for numerous Cresnet devices.

Cresnet Slave Mode—Selectable Cresnet Slave Mode enables the CP2 to be configured as a Cresnet slave device, effectively transforming it into a Cresnet expansion module. Such flexibility can offer a cost-effective solution for system expansion, providing a host of additional control ports in a single module.

- 2-Series engine
- Cresnet port - master/slave selectable
- 3 Com ports (RS-232/422/485)
- 8 IR/serial ports
- 8 Versiport I/O ports
- 8 Low-voltage relay ports
- Single-space EIA rack-mountable

SPECIFICATIONS

Processor

CPU: 32-bit Freescale ColdFire® Microprocessor

Memory

SDRAM: 32 MB
NVRAM: 256 KB
Flash: 4 MB



Operating System

Real-time, preemptive multi-threaded/multitasking kernel; FAT32 file system with long names; supports SIMPL™ Windows® and SIMPL+®

Connectors

COM A - C: (3) DB9 male, bidirectional RS-232/422/485 ports
 Up to 115.2k baud; hardware and software handshaking support
 All ports support C2N-NPA8 Network Poll Accelerator

INFRARED-SERIAL OUTPUT A - H: (8) 2-pin 3.5mm detachable terminal blocks, IR/Serial output ports;
 IR output up to 1.2 MHz
 1-way serial TTL/RS-232 (0-5 Volts) up to 115.2k baud
 Individual signal generator per port, allowing simultaneous firing of all ports

I/O Versiports 1 - 8: (1) 9-pin 3.5mm detachable terminal block
 Comprises (8) digital input/output or analog input ports (referenced to GND);
 Digital Input: Rated for 0-24 Volts DC, input impedance 20k ohms, logic threshold 1.24 Volts DC;
 Digital Output: 250 mA sync from maximum 24 Volts DC, catch diodes for use with "real world" loads;
 Analog Input: Rated for 0-10 Volts DC, protected to 24 Volts DC maximum, input impedance 20k ohms;
 Programmable 5 Volts, 2k ohms pull-up resistor per pin

RELAY OUTPUT 1 - 8: (2) 8-pin 3.5mm detachable terminal blocks
 Comprise (8) normally open, isolated relays;
 Rated 1 Amp, 30 Volts AC/DC
 MOV arc suppression across contacts

COMPUTER: (1) DB9 female, RS-232 computer console port

NET: (1) 4-pin 5mm detachable terminal block
 Cresnet port, Master/Slave selectable
 Expandable via C2N-NPA8 Network Poll Accelerator

24VDC: (1) 2.1 mm barrel DC power jack, 24 Volt DC power input (PW-2420RU power supply sold separately)
 Passes through to NET port to power Cresnet devices

> continued

CP2 Compact Control System (continued)

Reset Buttons

HW-R: Hardware reset (reboots the control system)

SW-R: Software reset (restarts the SIMPL program)

LED Indicators

PWR: (1 green) Indicates DC power supplied to unit

NET: (1 yellow) Indicates Cresnet bus activity

MSG: (1 red) Indicates control system has generated an error message

Power Requirements

24 Watts (1 Amp) @ 24 Volts DC

(PW-2420RU power supply sold separately)

Available Cresnet Power: 26 Watts using PW-2420RU

Cresnet Power Usage: 24 Watts (1 Amp @ 24 Volts DC) with no power supply connected to the 24VDC connector

Environmental

Temperature: 41° to 113°F (5° to 45°C)

Humidity: 10% to 90% RH (non-condensing)

Enclosure

Black metal, 1U 19" rack-mountable (rack ears included)

Dimensions

Height: 1.80 in (4.57 cm), 1.70 in (4.32 cm) without feet

Width: 17.03 in (43.24 cm), 19.0 in (48.26 cm) without ears

Depth: 6.66 in (16.91 cm)

Weight

3.54 lbs (1.61 kg)



Rear View

AVAILABLE ACCESSORIES

► **PW-2420RU**
50 Watt Regulated
Universal Power Supply

► **C2N-HBLOCK**
Cresnet Network
Distribution Block

► **CNSP-XX**
Custom Serial Interface Cable

► **IRP2**
IR Probe

CONTROL SYSTEMS

➤ 2-Series Control Systems

Compact Control System with Ethernet **MC2E**

Crestron 2-Series Control Systems are the brain of a complete integrated AV or automation solution. Every audio, video, and environmental element of the home, boardroom, classroom, or command center becomes integrated and accessible through the control system. Crestron 2-Series control systems are unmatched for power, performance and scalability, providing the ideal choice for today's demanding control applications.

The MC2E is a low-cost 2-Series Ethernet control system ideally suited for any application requiring the powerful control engine and Ethernet connectivity of Crestron's larger control systems, but with fewer control ports. The MC2E features two built-in COM ports, four IR/Serial ports, four I/O Versiports, four isolated relays, and Ethernet for control of video projectors, plasma displays, switchers, DVD players, screens, lifts, and much more. Additional control ports may be added using Cresnet expansion modules, or by "slaving" additional control processors.

2-Series Engine—At the heart of the MC2E is the powerful 32-bit Freescale ColdFire® processor. Crestron's exclusive enhanced real-time operating system makes the MC2E the fastest, most reliable control system available.

Cresnet—Cresnet is the communications backbone for many Crestron touchpanels, keypads, lighting controls, and other devices. The Cresnet bus is a simple, yet flexible 4-wire network that provides rock-solid bidirectional communication for numerous Cresnet devices.

Cresnet Slave Mode—Selectable Cresnet Slave Mode enables the MC2E to be configured as a Cresnet slave device, effectively transforming it into a Cresnet expansion module. Such flexibility can offer a cost-effective solution for system expansion, providing a host of additional control ports in a single module.

Ethernet—Crestron pioneered the IP-based control system to harness the vast possibilities of Ethernet and the Internet for remote control, monitoring, programming, and diagnostics. The MC2E is designed to deliver the world's most advanced IP control solution with full-duplex 10/100 Ethernet, built-in Web server and email client, and support for both static and dynamic IP addressing.

e-Control®2—Crestron's award-winning e-Control 2 XPanel solutions offer the most flexible range of IP control possibilities available. Using a Windows® computer or CE/PocketPC™ PDA device, e-Control 2 provides an amazing control GUI that looks and behaves just like a Crestron Isys® touchpanel.



RoomView®—Every Ethernet-enabled 2-Series control system works directly with Crestron's exclusive RoomView Help Desk software for the industry's most comprehensive facility-wide asset management solution.

SNMP—Built-in SNMP support enables network management of Crestron control systems using third-party SNMP software. As an alternate or supplement to RoomView, SNMP allows full control and monitoring from the IT Help Desk or NOC in a format that's familiar to IT personnel.

SSL—All Ethernet-enabled 2-Series control systems support SSL (Secure Sockets Layer), the industry standard for protecting sensitive network communications.

IR Wireless Option—When equipped with an optional CNXRMIRD IR receiver, the MC2E provides a low-cost wireless control solution using any of Crestron's IR wireless touchpanels, or a third-party universal IR remote.

- ▶ 2-Series engine | Dual-bus architecture
- ▶ Cresnet port - master/slave selectable
- ▶ 10/100 Ethernet | SSL encryption
- ▶ e-Control 2 and RoomView enabled | SNMP support
- ▶ 2 Com ports (RS-232/422/485)
- ▶ 4 IR/serial ports
- ▶ 4 Versiport I/O ports
- ▶ 4 Low-voltage relay ports
- ▶ IR wireless compatible using CNXRMIRD
- ▶ External power supply included
- ▶ Single-space EIA rack-mountable

SPECIFICATIONS

Processor

CPU: 32-bit Freescale ColdFire® Microprocessor

Memory

SDRAM: 32 MB

NVRAM: 256 KB

Flash: 4 MB

> continued

MC2E Compact Control System with Ethernet (continued)

Operating System

Real-time, preemptive multi-threaded/multitasking kernel; FAT32 file system with long names; supports SIMPL™ Windows® and SIMPL+®

Ethernet

10/100BaseT, auto-negotiating, full/half duplex, static IP or DHCP/DNS, SSL, TCP/IP, UDP/IP, CIP, SMTP, SNMP, built-in Web server and e-mail client; supports Crestron e-Control®2 XPanel and RoomView™ applications

Connectors

COM A - B: (2) DB9 male, bidirectional RS-232/422/485 ports Up to 115.2k baud; hardware and software handshaking support All ports support C2N-NPA8 Network Poll Accelerator

IR SERIAL OUT A - D: (4) 2-pin 3.5mm detachable terminal blocks IR/Serial output ports

IR output up to 1.2 MHz

1-way serial TTL/RS-232 (0-5 Volts) up to 115.2k baud

Individual signal generator per port, allowing simultaneous firing of all ports

I/O Versiports 1 - 4: (1) 5-pin 3.5mm detachable terminal block Comprises (4) digital input/output or analog input ports (referenced to GND);

Digital Input: Rated for 0-24 Volts DC, input impedance 20k ohms, logic threshold 1.24 Volts DC;

Digital Output: 250 mA sync from maximum 24 Volts DC, catch diodes for use with "real world" loads;

Analog Input: Rated for 0-10 Volts DC, protected to 24 Volts DC maximum, input impedance 20k ohms;

Programmable 5 Volts, 2k ohms pull-up resistor per pin

RELAY OUT 1 - 4: (1) 8-pin 3.5mm detachable terminal blocks

Comprises (4) normally open, isolated relays

Rated 1 Amp, 30 Volts AC/DC

MOV arc suppression across contacts

IR IN: (1) 3-pin 3.5mm detachable terminal block

For connection of the CNXRMIRD IR Receiver (sold separately)

Allows IR wireless control from Crestron or third-party remotes using RC-5 IR commands

LAN: (1) 8-wire RJ45 with 2 LED indicators

10/100BaseT Ethernet port

Green LED indicates link status

Yellow LED indicates Ethernet activity

COMPUTER: (1) DB9 female, RS-232 computer console port

NET: (1) 4-pin 3.5mm detachable terminal block

Cresnet port, Master/Slave selectable

Expandable via C2N-NPA8 Network Poll Accelerator

24VDC: (1) 2.1 mm barrel DC power jack, 24 Volt DC power input (PW-2410RU power supply included)

Passes through to NET port to power Cresnet devices

Reset Buttons

HW-R: Hardware reset (reboots the control system)

SW-R: Software reset (restarts the SIMPL program)

LED Indicators

PWR: (1 green) Indicates DC power supplied to unit

NET: (1 yellow) Indicates Cresnet bus activity

MSG: (1 red) Indicates control system has generated an error message

LNK: (1 red) Indicates a valid connection on LAN port

ACT: (1 red) Indicates activity on LAN port

Power Requirements

12 Watts (0.5 Amps) @ 24 Volts DC

(PW-2410RU power supply included)

Available Cresnet Power: 13 Watts using PW-2410RU (included), or 38 Watts using PW-2420RU (sold separately)

Cresnet Power Usage: 12 Watts (0.5 Amp @ 24 Volts DC) with no power supply connected to the 24VDC connector

Environmental

Temperature: 41° to 113°F (5° to 45°C)

Humidity: 10% to 90% RH (non-condensing)

Enclosure

Black metal, 1U 19" rack-mountable (rack ears included)

Dimensions

Height: 1.80 in (4.57 cm), 1.70 in (4.32 cm) without feet

Width: 17.03 in (43.24 cm), 19.0 in (48.26 cm) without ears

Depth: 8.65 in (21.96 cm)

Weight

4.3 lbs (2.0 kg)

INCLUDED ACCESSORIES

PW-2410RU

25 Watt Regulated Universal Power Supply

AVAILABLE ACCESSORIES

► PW-2420RU

50 Watt Regulated
Universal Power Supply

► CNSP-XX

Custom Serial Interface Cable

► IRP2

IR Probe

► CNXRMIRD

IR Receiver

► C2N-HBLOCK

Cresnet Network
Distribution Block

Integrated Wireless Control System **MC2W**

Crestron 2-Series Control Systems are the brain of a complete integrated AV or automation solution. Every audio, video, and environmental element of the home, boardroom, classroom, or command center becomes integrated and accessible through the control system. Crestron 2-Series control systems are unmatched for power, performance and scalability, providing the ideal choice for today's demanding control applications.

The MC2W is a compact 2-Series control system with integrated 1-way RF gateway. Equipped with two built-in COM ports, four IR/Serial ports, four I/O Versiports, and four isolated relays, the MC2W is a great single-box professional RF wireless control solution for boardrooms, lecture halls, home theaters, churches, museums, and more.

Integrated RF Wireless—The MC2W's built-in RF gateway is switchable between 418MHz and 434MHz for compatibility with all of Crestron's 1-way RF wireless touchpanels and handheld remotes.

IR Wireless Option—When equipped with an optional CNXRMIRD IR receiver, the MC2W allows for IR wireless control using any of Crestron's IR wireless touchpanels, or a third-party universal IR remote.

2-Series Engine—At the heart of the MC2W is the powerful 32-bit Freescale ColdFire® processor. Crestron's exclusive enhanced real-time operating system makes the MC2W the fastest, most reliable control system available.

Cresnet®—Cresnet is the communications backbone for many Crestron touchpanels, keypads, lighting controls, and other devices. The Cresnet bus is a simple, yet flexible 4-wire network that provides rock-solid bidirectional communication for numerous Cresnet devices.

Cresnet Slave Mode—Selectable Cresnet Slave Mode enables the MC2W to be configured as a Cresnet slave device, effectively transforming it into a Cresnet expansion module. Such flexibility can offer a cost-effective solution for system expansion, providing a host of additional control ports in a single module.

- 2-Series engine
- Cresnet port - master/slave selectable
- 2 Com ports (RS-232/422/485)
- 4 IR/serial ports
- 4 Versiport I/O ports
- 4 Low-voltage relay ports
- Built-in 1-way RF wireless gateway



- IR wireless compatible using CNXRMIRD
- External power supply included
- Single-space EIA rack-mountable

SPECIFICATIONS

Processor

CPU: 32-bit Freescale ColdFire® Microprocessor

Memory

SDRAM: 32 MB

NVRAM: 256 KB

Flash: 4 MB

Operating System

Real-time, preemptive multi-threaded/multitasking kernel; FAT32 file system with long names; supports SIMPL™ Windows® and SIMPL+®

Wireless

RF Receiver: Selectable 433.92 (434) or 418 MHz 1-way RF

Range: Up to 300 feet

Maximum 15 touchpanels or 240 handheld remotes per

MC2W/gateway

Minimum distance allowed between MC2W's/gateways is 50 feet

Connectors

COM A - B: (2) DB9 male, bidirectional RS-232/422/485 ports

Up to 115.2k baud; hardware and software handshaking support

All ports support C2N-NPA8 Network Poll Accelerator

IR SERIAL OUT A - D: (4) 2-pin 3.5mm detachable terminal blocks

IR/Serial output ports

IR output up to 1.2 MHz

1-way serial TTL/RS-232 (0-5 Volts) up to 115.2k baud

Individual signal generator per port, allowing simultaneous firing of

all ports

> continued

MC2W Integrated Wireless Control System (continued)

I/O Versiports 1 - 4: (1) 5-pin 3.5mm detachable terminal block comprising (4) digital input/output or analog input ports (referenced to GND);

Digital Input: Rated for 0-24 Volts DC, input impedance 20k ohms, logic threshold 1.24 Volts DC

Digital Output: 250 mA sync from maximum 24 Volts DC, catch diodes for use with "real world" loads

Analog Input: Rated for 0-10 Volts DC, protected to 24 Volts DC maximum, input impedance 20k ohms

Programmable 5 Volts, 2k ohms pull-up resistor per pin

RELAY OUT 1 - 4: (1) 8-pin 3.5mm detachable terminal blocks comprising (4) normally open, isolated relays

Rated 1 Amp, 30 Volts AC/DC

MOV arc suppression across contacts

IR IN: (1) 3-pin 3.5mm detachable terminal block

For connection of the CNXRMIIRD IR Receiver (sold separately)

Allows IR wireless control from Crestron or third-party remotes using RC-5 IR commands

ANTENNA: (1) BNC female, (antenna included)

Impedance: 50 ohms

COMPUTER: (1) DB9 female, RS-232 computer console port

NET: (1) 4-pin 3.5mm detachable terminal block

Cresnet port, Master/Slave selectable

Expandable via C2N-NPA8 Network Poll Accelerator

24VDC: (1) 2.1 mm barrel DC power jack

24 Volt DC power input (PW-2410RU power supply included)

Passes through to NET port to power Cresnet devices

Reset Buttons

HW-R: Hardware reset (reboots the control system)

SW-R: Software reset (restarts the SIMPL program)

LED Indicators

PWR: (1 green) Indicates DC power supplied to unit

NET: (1 yellow) Indicates Cresnet bus activity

MSG: (1 red) Indicates control system has generated an error message

SIG: (1 red) Indicates RF communication with a Crestron transmitter

Power Requirements

12 Watts (0.5 Amps) @ 24 Volts DC
(PW-2410RU power supply included)

Available Cresnet Power: 13 Watts using PW-2410RU (included), or 38 Watts using PW-2420RU (sold separately)

Cresnet Power Usage: 12 Watts (0.5 Amp @ 24 Volts DC) with no power supply connected to the 24VDC connector

Environmental

Temperature: 41° to 113°F (5° to 45°C)

Humidity: 10% to 90% RH (non-condensing)

Enclosure

Black metal, 1U 19" rack mountable (rack ears included)

Dimensions

Height: 1.80 in (4.57 cm), 1.70 in (4.32 cm) without feet

Width: 17.03 in (43.24 cm), 19.0 in (48.26 cm) without ears

Depth: 9.07 in (23.03 cm)

Weight

4.3 lbs (2.0 kg)

INCLUDED ACCESSORIES

PW-2410RU

25 Watt Regulated Universal Power Supply

AVAILABLE ACCESSORIES

► PW-2420RU

50 Watt Regulated
Universal Power Supply

► CNSP-XX

Custom Serial
Interface Cable

► CNXRMIIRD

IR Receiver

► CNANT

High-performance
extension antenna

► C2N-HBLOCK

Cresnet Network
Distribution Block

► IRP2

IR Probe

Room Media Controller **QM-RMC**

The QM-RMC is a very compact 2-Series Ethernet control system, which may be used standalone for small or specialized IP-based control applications, or as an expansion module for larger systems. The QM-RMC provides a very cost-effective solution for controlling and monitoring any number of classroom video projectors, public display devices, centralized AV matrix routers, codecs, lighting systems, or remote motorized cameras over an IP network. Combining high performance and versatility at an affordable cost makes the QM-RMC ideal for mass deployment throughout college campuses, corporate meeting and training centers, and other multi-room facilities.

The QM-RMC is designed to mount inconspicuously at a projector/plasma or any device that requires control. The QM-RMC communicates securely and transparently via 10/100 Ethernet to any IP-enabled Crestron touchpanel or control system. Crestron e-Control®2 XPanel technology is fully supported as well allowing complete control from a PC or PDA device. Hundreds of AV devices and systems throughout a facility can be managed easily using Crestron's powerful RoomView® Help Desk Software, delivering the industry's best centralized control, monitoring and scheduling solution.

Two bi-directional RS-232 ports and one IR/Serial port are provided on the QM-RMC for full control of a wide array of AV devices. In addition, four digital input ports provide for direct connection to room occupancy sensors, power sensors, etc.

- [Compact 2-Series control processor / expansion module](#)
- [10/100 Ethernet | SSL encryption](#)
- [e-Control 2 enabled | SNMP support](#)
- [2 Com ports \(RS-232\)](#)
- [1 IR/serial port](#)
- [4 Digital input ports](#)
- [External power supply included](#)

SPECIFICATIONS

Processor

CPU: 32-bit Freescale ColdFire® Microprocessor

Memory

SDRAM: 32 MB

NVRAM: 256 KB

Flash: 4 MB



Operating System

Real-time, preemptive multi-threaded/multitasking kernel; FAT32 file system with long names; supports SIMPL™ Windows® and SIMPL+®

Ethernet

10/100BaseT, auto-negotiating, full/half duplex, static IP or DHCP/DNS, SSL, TCP/IP, UDP/IP, CIP, SMTP, SNMP, built-in Web server and e-mail client; supports Crestron e-Control®2 XPanel and RoomView® applications

Connectors

COM A - B: (2) DB9 male, bidirectional RS-232 ports
Up to 115.2k baud; hardware and software handshaking support
Com port B also serves as the computer console port

IR: (1) 2-pin 3.5mm detachable terminal block, IR/Serial output port
IR output up to 1.2 MHz

1-way serial TTL/RS-232 (0-5 Volts) up to 115.2k baud
Expandable via ST-SPL to control multiple disparate devices

INPUT: (1) 5-pin 3.5mm detachable terminal block
Comprises (4) digital input ports
Rated for 0-24 Volts DC, referenced to GND
Input Impedance: 2k ohms pulled up to 5 Volts DC
Logic Threshold: 2.5 Volts DC nominal

LAN: (1) 8-wire RJ45 with 2 LED indicators
10/100BaseT Ethernet port
Green LED indicates link status
Yellow LED indicates Ethernet activity

12VDC: (1) 2.5 mm barrel DC power jack
12 Volt DC power input (PW-1205 power supply included)

Reset Buttons

HW-R: Hardware reset (reboots the control system)
SW-R: Software reset (restarts the SIMPL program)

LED Indicators

PWR: (1 green) Indicates DC power supplied to unit
ACT: (1 red) Indicates activity on the LAN port
COM A - B: (2 red) Indicate activity on each respective COM port
IR: (1 red) Indicates activity on the IR port
INPUT: (1 red) Indicate activity on any digital input port

> continued

QM-RMC Room Media Controller (continued)

Power Requirements

QM-RMC: 6 Watts (0.5 Amps) @ 12 Volts DC

Power Supply (PW-1205 included): 120 Volts AC, 60 Hz

Environmental

Temperature: 41° to 113°F (5° to 45°C)

Humidity: 10% to 90% RH (non-condensing)

Enclosure

Black metal

Dimensions

Height: 1.43 in (3.63 cm)

Width: 4.65 in (11.81 cm)

Depth: 5.41 in (13.74 cm)

Weight

1.34 lb (0.61 kg)

INTERNATIONAL VERSION (230 VAC)

QMI-RMC

All the features and specifications of the QM-RMC except:

Power Requirements

QMI-RMC: 6 Watts (0.5 Amps) @ 12 Volts DC

Power Supply (PW-1210RU included): 230 Volts AC, 50 Hz

INCLUDED ACCESSORIES

PW-1205 (or PW-1210RU)

12 Volt Power Pack

AVAILABLE ACCESSORIES

► **CNSP-XX**
Custom Serial
Interface Cable

► **IRP2**
IR Probe

► **CNXRMCS**
Current Sensor

Y-BUS CONTROL CARDS

C2COM-2 2 COM Port Control Card

The C2COM-2 installs in any Y-Bus expansion slot of a 2-Series control system to provide two bi-directional RS-232/422/485 ports with hardware handshaking.

SPECIFICATIONS

Connectors

COM A - B: (2) DB9 male
Bidirectional RS-232/422/485 ports
Up to 115.2k baud
Hardware and software handshaking support

Power Requirements

Cresnet Power Usage: 2 Watts
(0.083 Amps @ 24 Volts DC)

AVAILABLE ACCESSORIES

CNSP-XX
Custom Serial Interface Cable



C2COM-3 3 COM Port Control Card

The C2COM-3 installs in any Y-Bus expansion slot of a 2-Series control system to provide three bi-directional RS-232/422/485 ports with hardware handshaking.

SPECIFICATIONS

Connectors

COM A - B: (2) DB9 male
Bidirectional RS-232/422/485 ports
Up to 115.2k baud
Hardware and software handshaking support

Power Requirements

Cresnet Power Usage: 2 Watts
(0.083 Amps @ 24 Volts DC)

AVAILABLE ACCESSORIES

CNSP-XX
Custom Serial Interface Cable



Y-BUS CONTROL CARDS

C2IR-8 8 IR/Serial Output Control Card

The C2IR-8 installs in any Y-Bus expansion slot of a 2-Series control system to provide eight ports for infrared (IR) or 1-way serial communication and control.

SPECIFICATIONS

Connectors

INFRARED-SERIAL OUTPUT A - H: (8) 2-pin 3.5mm detachable terminal blocks, IR/Serial output ports
IR output up to 1.2 MHz
1-way serial TTL/RS-232 (0-5 Volts) up to 115.2k baud
Individual signal generator per port, allowing simultaneous firing of all ports

Power Requirements

Cresnet Power Usage: 3 Watts
(0.125 Amps @ 24 Volts DC)

AVAILABLE ACCESSORIES

IRP2

IR Probe



CNXIO-16 16 I/O Versiport Control Card

The CNXIO-16 features 16 "Versiports" which function as analog inputs, digital inputs, or digital outputs. It installs in any Y-Bus expansion slot of a 2-Series control system.

SPECIFICATIONS

Connectors

I/O Versiports A1 - A8, B1 - B8: (2) 9-pin 5mm detachable terminal blocks comprising (16) digital input/output or analog input ports (referenced to GND);
Digital Input: Rated for 0-24 Volts DC, input impedance 20k ohms, logic threshold 1.24 Volts DC
Digital Output: 250 mA sync from maximum 24 Volts DC, catch diodes for use with "real world" loads
Analog Input: Rated for 0-10 Volts DC, protected to 24 Volts DC maximum, input impedance 20k ohms
Programmable 5 Volts, 2k ohms pull-up resistor per pin

Power Requirements

Cresnet Power Usage: 2 Watts
(0.083 Amps @ 24 Volts DC)



Y-BUS CONTROL CARDS

CNXAO-8 8 Analog Output Control Card

The CNXAO-8 installs in any Y-Bus expansion slot of a 2-Series control system to provide eight adjustable analog output ports.

SPECIFICATIONS

Connectors

ANALOG OUTPUT A1 - A4, B1 - B4: (2) 5-pin 3.5mm detachable terminal blocks;
Comprises (8) analog output ports (referenced to GND)
Voltage Span/Offset: ± 12 Volts DC
Maximum Source/Sink Current: 80mA
Output Resolution: 1024 levels (10 bit)

Controls

SPAN (A & B): (2) adjust voltage span collectively for ports 1-4 of each group respectively
OFFSET 1-4 (A & B): (8) adjust voltage offset individually for each port

Power Requirements

Cresnet Power Usage: 8 Watts plus 2 Watts per fully loaded output, 24 Watts maximum (1 Amp @ 24 Volts DC)



CNXRY-8 8 Relay Control Card

The CNXRY-8 installs in any Y-Bus expansion slot of a 2-Series control system to provide eight isolated, low-voltage relay closures.

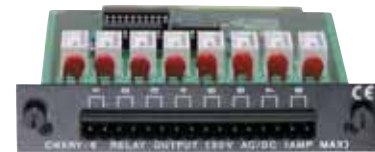
SPECIFICATIONS

Connectors

RELAY OUTPUT 1 - 8: (1) 16-pin 5mm detachable terminal block comprising (8) normally open, isolated (form 'C') relays
Rated 1 Amp, 30 Volts AC/DC
MOV arc suppression across contacts

Power Requirements

Cresnet Power Usage: 3 Watts
(0.125 Amp @ 24 Volts DC)



Y-BUS CONTROL CARDS

CNXRY-16 16 Relay Control Card

The CNXRY-16 installs in any Y-Bus expansion slot of a 2-Series control system to provide 16 isolated, low-voltage relay closures. Each group of eight relays is referenced to a shared, floating common.

SPECIFICATIONS

Connectors

RELAY OUTPUT A1 - A8, B1 - B8:

(2) 9-pin 5mm detachable terminal blocks comprising (2 x 8) normally open, isolated relays (each group of 8 referenced to shared common);

Rated 1 Amp, 30 Volts AC/DC

MOV arc suppression across contacts

Power Requirements

Cresnet Power Usage: 5 Watts

(0.208 Amp @ 24 Volts DC)



CNXMIDI MIDI Control Card

The CNXMIDI is a fully programmable MIDI in, out and thru interface. It installs in any Y-Bus expansion slot of a 2-Series control system.

SPECIFICATIONS

Connectors

MIDI IN: (1) 5-pin DIN female

MIDI OUT: (1) 5-pin DIN female

MIDI THRU: (1) 5-pin DIN female

Power Requirements

Cresnet Power Usage: 4 Watts (0.167 Amp @ 24 Volts DC)



Y-BUS CONTROL CARDS

C2VEQ-4 4-Channel Volume/EQ Control Card

The C2VEQ-4 provides a very simple solution for adding professional quality volume control, equalization, and signal routing to any card frame-based Crestron control system. In the space of a single Y-bus expansion card, the C2VEQ-4 packs four channels of digital volume and tone control, four 12-band graphic/parametric equalizers, and a fully-adjustable 4x4 matrix mixer. Dual DSPs and 24-bit 96 kHz A/D and D/A converters attain high-end audio performance perfectly suited for a multitude of applications in boardrooms, auditoriums, night clubs, and homes.

The C2VEQ-4 is controllable through any Crestron touchpanel, keypad, handheld remote, or e-Control®2 user interface, with true feedback provided for every parameter. Mixer and EQ settings are easily configured and adjusted through Crestron's QM Tools software (part of Crestron Toolbox) and saved in presets stored onboard the C2VEQ-4 card.

Volume/Tone Control—In its most basic configuration, the C2VEQ-4 provides four individual audio channels which may be operated independently or linked for stereo operation. Each channel includes adjustments for volume, bass, treble, and mute, with definable ramp times and scaling for fully customized operation. Protective relays on each output are included to prevent “thumps” during power-up and provide 100dB attenuation for dead-silent muting.

Matrix Mixer—The 4x4 matrix mixer allows any input to be routed to any or all output channels with full control over each individual level. Using the C2VEQ-4, up to four line-level sources may be mixed and distributed to up to four destinations, with each destination receiving a different mix as needed. A master volume adjustment is also included to make overall level adjustment a snap.

Five mixer presets may be stored onboard the C2VEQ-4, with additional presets possible within the control system if needed. Such power and flexibility makes the C2VEQ-4 ideal for a host of mixing and multi-zone applications.

Graphic/Parametric EQ—Each of the four output channels includes a full 12-band equalizer eliminating the need for additional outboard processors. Five



selectable modes of audio equalization are available per output channel, providing up to 12 bands of fully parametric EQ or varying combinations of parametric and graphic EQ including a filter set optimized for speech applications.

Five parametric EQ presets and ten graphic EQ “trim presets” may be stored onboard the C2VEQ-4, allowing for save and recall of different EQ curves to account for changing room acoustics, audio material, or listener preference.

The C2VEQ-4 installs in any Y-Bus expansion slot of a 2-Series control system. The C2VEQ-4 is also available as the C2N-VEQ4 Cresnet module.

- ▶ 24-bit 96KHz A/D and D/A converters | Dual DSPs
- ▶ 4 balanced/unbalanced line-level I/O channels
- ▶ Fully adjustable 4 x 4 audio matrix mixer
- ▶ Independent volume, bass, treble, and mute per channel
- ▶ Relays for -100 dB muting and “thump” prevention
- ▶ 12-band parametric or graphic equalization per output channel
- ▶ Preset and real-time control with true feedback via cresnet
- ▶ Occupies a single Y-bus expansion card slot

SPECIFICATIONS

Audio

Features: 4x4 Matrix Mixer, 4-Channel Digital Audio Processor

Master Volume: -80dB to +20dB, 0.1dB steps (balanced I/O)

Channel Volume: -80dB to +12dB, 0.1dB steps from QM Tools; -80dB to +0dB, 0.1dB steps from SIMPL (balanced I/O)

> continued

Y-BUS CONTROL CARDS

C2VEQ-4 4-Channel Volume/EQ Control Card (continued)

Mute: > -100dB

Bass/Treble Gain Range: ± 15 dB, 0.5dB steps

Equalization Modes: 10-band graphic plus 2-band parametric, 5-band graphic plus 7-band parametric, speech-optimized 5-band graphic plus 7-band parametric, 3-band graphic plus 9-band parametric, or 12-band parametric

PEQ Filter Gain: ± 12 dB, 0.1 dB steps from QM Tools;

+24/-36dB, 0.1dB steps from SIMPL

PEQ Filter Bandwidth: 0.02 to 2.0 octaves (1.0 to 3.0 for shelving) from QM Tools, 0.02 to 3.5 from SIMPL

PEQ Filter Center Frequency: 25Hz to 19.9kHz from QM Tools, 5Hz to 24kHz from SIMPL

PEQ Filter Types: low pass, high pass, EQ filter (peaking/notching), bass shelf, and treble shelf

GEQ Filter Gain: +5/-10dB, 0.1dB steps from QM Tools; ± 10 dB, 0.1dB steps from SIMPL

GEQ Filter Center Frequencies: 31.5, 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz (10-band); 63, 250, 1k, 4k, 10k Hz (5-band); 160, 600, 1k, 2.5k, 5k Hz (Speech Opt. 5-band); 250, 1k, 4k Hz (3-band)

Frequency Response: ± 0.1 dB 20Hz to 22kHz, ± 0.5 dB 10Hz to 30kHz

Total Harmonic Distortion (THD) + Noise:

<0.008% @1kHz

S/N Ratio: >97dB balanced, >95dB unbalanced, 20Hz to 22kHz A-weighted

Crosstalk: > -90dB 20Hz to 22kHz

Common Mode Rejection: >90dB 20Hz to 22kHz

Connectors

IN 1 - 4: (2) 5-pin 3.5mm detachable terminal blocks

Comprises (4) balanced/unbalanced line-level audio inputs

Maximum Input Level: 4 V_{RMS} balanced, 2 V_{RMS} unbalanced

Input Impedance: 10k ohms balanced, 5k ohm unbalanced

OUT 1 - 4: (2) 5-pin 3.5mm detachable terminal blocks

Comprises (4) balanced/unbalanced line-level audio outputs

Maximum Output Level: 4 V_{RMS} balanced, 2 V_{RMS} unbalanced

Output Impedance: 200 ohms balanced, 100 ohms unbalanced

Power Requirements

Cresnet Power Usage: 8 Watts

(0.34 Amps @ 24 Volts DC)

Z-BUS CONTROL CARDS

C2ENET-1 Single Port Ethernet Card

The C2ENET-1 is a 10/100BaseT half/full duplex Ethernet card that installs in any Z-Bus expansion slot of a 2-Series control system. The C2ENET-1 provides Ethernet connectivity to enable the control system's built-in Web server and e-Control®2 capabilities. The C2ENET-1 allows remote diagnostics and programming as well as Ethernet intersystem communications (EIC) over an Ethernet LAN, WAN or Internet.



SPECIFICATIONS

Connectors

LAN A: (1) 8-wire RJ45 with 2 LED indicators
10/100BaseT Ethernet port
Green LED indicates link status
yellow LED indicates Ethernet activity

Power Requirements

Cresnet Power Usage: 2 Watts (0.083 amps @ 24 VDC)

C2ENET-2 Dual Port Ethernet Card

The C2ENET-2 is a dual port Ethernet card with the same features and functionality as the C2ENET-1, plus the C2ENET-2 enables the control system's built-in firewall, router and network address translator (NAT). This allows for creation of a dedicated internal network for Crestron and other related IP enabled devices through the LAN B port of the C2ENET-2. The LAN A port provides a secure single-point connection for the entire internal network to the client's LAN/WAN and Internet using a single external IP address.



SPECIFICATIONS

Connectors

LAN A: (1) 8-wire RJ45 with 2 LED indicators
10/100BaseT Ethernet port, connects to client's LAN/WAN
Green LED indicates link status
Yellow LED indicates Ethernet activity

LAN B: (1) 8-wire RJ45 with 2 LED indicators
10/100BaseT Ethernet port
Connects to the local control system LAN
Green LED indicates link status
yellow LED indicates Ethernet activity

Power Requirements

Cresnet Power Usage: 3 Watts (0.125 amps @ 24 VDC)

ST-COM 2 COM Port Module



The ST-COM is a Cresnet expansion module that provides two independent bidirectional RS-232/422/485 COM ports. Typical applications include control of display devices, switchers, lighting systems, security systems, and more. The ST-COM may be used to provide a serial control interface at a remote location, or may be rack mounted in the central equipment cabinet to expand the number of control system ports (ST-RMK rack mount kit sold separately). Communication with the control system is via a single Cresnet connection.

SPECIFICATIONS

Connectors

COM A - B: (2) DB9 male, bidirectional RS-232/422/485 ports Up to 115.2k baud; hardware and software handshaking support

NET: (2) 6-pin RJ11 female, Cresnet slave ports, paralleled Connect to Cresnet control network

12VDC: (1) 2.5 mm barrel DC power jack
12 Volt DC power input (PW-1205 power supply included)

LED Indicators

PWR: (green) Indicates power supplied from Cresnet control network or 12VDC power jack

NET: (yellow) Indicates communication with Cresnet system

RXD (A&B): (2 red) Indicate reception of serial data at COM port A or B

TXD (A&B): (2 red) Indicate transmission of serial data on COM port A or B

RTS (A&B): (2 red) If handshaking is enabled, indicate COM port A or B is ready to receive data

CTS (A&B): (2 red) If handshaking is enabled, indicate "clear to send" signal from device connected to COM port A or B

Power Requirements

12VDC: 6 Watts (0.5 Amps) @ 12 Volts DC

Power Supply (PW-1205 included): 120 Volts AC, 60 Hz

Cresnet Power Usage: 2.5 Watts (0.11 Amp @ 24 Volts DC) with no power supply connected to the 12VDC connector

Enclosure

Black metal, 0.5U 19" rack-mountable using optional ST-RMK (sold separately)

Dimensions

Height: 1.80 in (4.57 cm), 1.70 in (4.32 cm) without feet

Width: 7.07 in (17.95 cm)

Depth: 6.32 in (16.06 cm)

Weight

2.0 lbs (0.93 kg)

INTERNATIONAL VERSION (230 VAC)

STI-COM

All the features and specifications of the ST-COM except:

Power Requirements

12VDC: 6 Watts (0.5 Amps) @ 12 Volts DC

Power Supply (PW-1210RU included): 230 Volts AC, 50 Hz

Cresnet Power Usage: 2.5 Watts (0.11 Amp @ 24 Volts DC) with no power supply connected to the 12VDC connector

INCLUDED ACCESSORIES

PW-1205 (or PW-1210RU)

12 Volt Power Pack

AVAILABLE ACCESSORIES

► **ST-RMK**
Rack Mount Kit

► **CNRJ11**
4-Wire Terminal Block to
RJ11 Cresnet Converter

► **CNSP-XX**
Custom Serial Interface Cable

8 Relay and 4 Digital/Analog Input Module **ST-IO**

The ST-IO is a Cresnet expansion module that provides eight low-voltage relay outputs and four digital/analog input ports. Typical applications include control of lighting, screens, drapes, and more. In "closure" mode, each input port will sense a contact closure signal from a door switch, motion sensor, etc., and can also accept analog 0-24 Volt DC signals when in "voltage" mode. The ST-IO may be used to provide a low-voltage control interface at a remote location, or may be rack mounted in the central equipment cabinet to expand the number of control system ports (ST-RMK rack mount kit sold separately). Communication with the control system is via a single Cresnet connection.

SPECIFICATIONS

Connectors

RELAY OUTPUT 1 - 8: (1) 16-pin 5mm detachable terminal block
Comprises (8) normally open, isolated relays
Rated 1 Amp, 30 Volts AC/DC maximum; 100µA, 100mV minimum

DIGITAL IN 1 - 4: (1) 5-pin 5mm detachable terminal block
Comprises (4) digital or analog input ports (referenced to GND)
Digital Input (closure mode): Input threshold 2 Volts DC (± 0.5 VDC),
input impedance 1k ohms to +5VDC; 5 Volt, 1k ohms pull-up resistor
and protection diode per pin;
Analog Input (voltage mode): Input threshold 2 Volts DC (± 0.5 VDC),
voltage range 0-24 Volts DC, input impedance 44k ohms

NET: (2) 6-pin RJ11 female, Cresnet slave ports, paralleled
Connect to Cresnet control network

12VDC: (1) 2.5 mm barrel DC power jack
12 Volt DC power input (PW-1205 power supply included)

LED Indicators

PWR: (green) Indicates power supplied from Cresnet control network or 12VDC power jack

NET: (yellow) Indicates communication with Cresnet system

INPUT (1-4): (4 red) Indicate "high" signals at digital input ports 1-4

RELAY (1-8): (4 red) Illuminate when relay ports 1-8 are "closed"

Power Requirements

12VDC: 6 Watts (0.5 Amps) @ 12 Volts DC

Power Supply (PW-1205 included): 120 Volts AC, 60 Hz

Cresnet Power Usage: 6 Watts (0.25 Amp @ 24 Volts DC)
with no power supply connected to the 12VDC connector

Environmental

Temperature: 41° to 113°F (5° to 45°C)

Humidity: 10% to 90% RH (non-condensing)



Enclosure

Black metal, 0.5U 19" rack-mountable using optional ST-RMK
(sold separately)

Dimensions

Height: 1.80 in (4.57 cm), 1.70 in (4.32 cm) without feet

Width: 7.07 in (17.95 cm)

Depth: 6.32 in (16.06 cm)

Weight

1.96 lbs (0.89 kg)

INTERNATIONAL VERSION (230 VAC)

STI-IO

All the features and specifications of the ST-IO except:

Power Requirements

12VDC: 6 Watts (0.5 Amps) @ 12 Volts DC

Power Supply (PW-1210RU included): 230 Volts AC, 50 Hz

Cresnet Power Usage: 6 Watts (0.25 Amp @ 24 Volts DC)

with no power supply connected to the 12VDC connector

INCLUDED ACCESSORIES

PW-1205 (or PW-1210RU)

12 Volt Power Pack

AVAILABLE ACCESSORIES

► ST-RMK

Rack Mount Kit

► CNRJ11

4-Wire Terminal Block to
RJ11 Cresnet Converter

C2N-VEQ4 4-Channel Volume/EQ Control Module



The C2N-VEQ4 provides a very simple solution for adding professional quality volume control, equalization, and signal routing to any Crestron control system. In a compact half-space rack-mountable chassis, the C2N-VEQ4 delivers four channels of digital volume and tone control, four 12-band graphic/parametric equalizers, and a fully-adjustable 4x4 matrix mixer. Dual DSPs and 24-bit 96 kHz A/D and D/A converters attain high-end audio performance perfectly suited for a multitude of applications in boardrooms, auditoriums, night clubs, and homes.

The C2N-VEQ4 is controllable through any Crestron touchpanel, keypad, handheld remote, or e-Control®2 user interface, with true feedback provided for every parameter. Mixer and EQ settings are easily configured and adjusted through Crestron's QM Tools software (part of Crestron Toolbox) and saved in presets stored onboard the C2N-VEQ4 module.

Volume/Tone Control—In its most basic configuration, the C2N-VEQ4 provides four individual audio channels which may be operated independently or linked for stereo operation. Each channel includes adjustments for volume, bass, treble, and mute, with definable ramp times and scaling for fully customized operation. Protective relays on each output are included to prevent “thumps” during power-up and provide 100dB attenuation for dead-silent muting.

Matrix Mixer—The 4x4 matrix mixer allows any input to be routed to any or all output channels with full control over each individual level. Using the C2N-VEQ4, up to four line-level sources may be mixed and distributed to up to four destinations, with each destination receiving a different mix as needed. A master volume adjustment is also included to make overall level adjustment a snap.

Five mixer presets may be stored onboard the C2N-VEQ4, with additional presets possible within the control system if needed. Such power and flexibility makes the C2N-VEQ4 ideal for a host of mixing and multi-zone applications.

Graphic/Parametric EQ—Each of the four output channels includes a full 12-band equalizer eliminating the need for additional outboard processors. Five selectable modes of audio equalization are available per output channel, providing up to 12 bands of fully parametric EQ or varying combinations of parametric and graphic EQ including a filter set optimized for speech applications.

Five parametric EQ presets and ten graphic EQ “trim presets” may be stored onboard the C2N-VEQ4, allowing for save and recall of different EQ curves to account for changing room acoustics, audio material, or listener preference.

The C2N-VEQ4 is a Cresnet slave device designed to communicate with any 2-Series control system via the Cresnet bus. The C2N-VEQ4 is also available as the C2VEQ-4 Y-Bus expansion card for 2-Series card frames.

- ▶ 24-bit 96kHz A/D and D/A converters | Dual DSPs
- ▶ 4 balanced/unbalanced line-level I/O channels
- ▶ Fully adjustable 4 x 4 audio matrix mixer
- ▶ Independent volume, bass, treble, and mute per channel
- ▶ Relays for -100 dB muting and “thump” prevention
- ▶ 12-band parametric or graphic equalization per output channel
- ▶ Preset and real-time control with true feedback via cresnet
- ▶ Half-rackspace Cresnet expansion module

SPECIFICATIONS

Audio

Features: 4x4 Matrix Mixer, 4-Channel Digital Audio Processor

Master Volume: -80dB to +20dB, 0.1dB steps (balanced I/O)

Channel Volume: -80dB to +12dB, 0.1dB steps from QM Tools; -80dB to +0dB, 0.1dB steps from SIMPL (balanced I/O)

Mute: > -100dB

Bass/Treble Gain Range: ±15dB, 0.5dB steps

Equalization Modes: 10-band graphic plus 2-band parametric, 5-band graphic plus 7-band parametric, speech-optimized 5-band graphic plus 7-band parametric, 3-band graphic plus 9-band parametric, or 12-band parametric

PEQ Filter Gain: ±12dB, 0.1 dB steps from QM Tools; +24/-36dB, 0.1dB steps from SIMPL

PEQ Filter Bandwidth: 0.02 to 2.0 octaves (1.0 to 3.0 for shelving) from QM Tools, 0.02 to 3.5 from SIMPL

PEQ Filter Center Frequency: 25Hz to 19.9kHz from QM Tools, 5Hz to 24kHz from SIMPL

PEQ Filter Types: low pass, high pass, EQ filter (peaking/notching), bass shelf, and treble shelf

4-Channel Volume/EQ Control Module **C2N-VEQ4**

GEQ Filter Gain: +5/-10dB, 0.1dB steps from QM Tools; ±10dB, 0.1dB steps from SIMPL
GEQ Filter Center Frequencies: 31.5, 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz (10-band); 63, 250, 1k, 4k, 10k Hz (5-band); 160, 600, 1k, 2.5k, 5k Hz (Speech Opt. 5-band); 250, 1k, 4k Hz (3-band)
Frequency Response: ±0.1dB 20Hz to 22kHz, ±0.5dB 10Hz to 30kHz
Total Harmonic Distortion (THD) + Noise: <0.008% @1kHz
S/N Ratio: >97dB balanced, >95dB unbalanced, 20Hz to 22kHz A-weighted
Crosstalk: > -90dB 20Hz to 22kHz
Common Mode Rejection: >90dB 20Hz to 22kHz

Connectors

IN 1 - 4: (2) 5-pin 3.5mm detachable terminal blocks
 Comprises (4) balanced/unbalanced line-level audio inputs
 Maximum Input Level: 4 V_{RMS} balanced, 2 V_{RMS} unbalanced
 Input Impedance: 10k ohms balanced, 5k ohm unbalanced
OUT 1 - 4: (2) 5-pin 3.5mm detachable terminal blocks
 Comprises (4) balanced/unbalanced line-level audio outputs
 Maximum Output Level: 4 V_{RMS} balanced, 2 V_{RMS} unbalanced
 Output Impedance: 200 ohms balanced, 100 ohms unbalanced
NET: (1) 4-pin 5mm detachable terminal block, Cresnet slave port
 Connects to Cresnet control network
G: (1) 6-32 screw, chassis ground lug

LED Indicators

PWR: (green) Indicates 24 Volts DC power supplied from Cresnet control network
NET: (yellow) Indicates communication with Cresnet system
ACTIVITY 1 - 4: (red) Illuminates when a parameter is being changed on a given channel
SETUP (rear): (red) Used for Touch-Settable ID (TSID)

Buttons

SETUP (rear): Used for Touch-Settable ID (TSID)

Power Requirements

Cresnet Power Usage: 8 Watts (0.34 Amps @ 24 Volts DC)

Environmental

Temperature: 32° to 122°F (0° to 50°C)
Humidity: 10% to 90% RH (non-condensing)

Enclosure

Black metal, 0.5U 19" rack mountable using optional ST-RMK (sold separately)

Dimensions

Height: 1.80 in (4.57 cm), 1.70 in (4.32 cm) without feet
Width: 7.07 in (17.96 cm)
Depth: 6.38 in (16.21 cm)

Weight

1.86 lbs (0.837 kg)

AVAILABLE ACCESSORIES

- **ST-RMK**
Rack Mount Kit

CN-TVAV TV/AV Control Module



The CN-TVAV is a Cresnet expansion module that provides multiple types of control ports for interface to a wide range of video monitors, televisions, projectors, and other AV devices. A single IR port provides for control of any IR controlled device through a small stick-on IR emitter probe (included), and can also support 1-way serial protocols. The COM port provides a full featured bidirectional RS-232 control interface. A current sensor is built into the CN-TVAV to provide confirmation of a device's power on/off state. Four Versiport I/O ports support connections from external contact closure-based motion sensors, current sensors, etc., and can also function as low-current solid-state relays and sense analog 0-10 Volt DC signals.

The CN-TVAV is powered by its own built-in power supply. It is ideal wherever a remote IR/RS-232 control interface is required, and may be rack mounted using the optional ST-RMK rack mount kit (sold separately). Communication with the control system is via a single Cresnet connection.

SPECIFICATIONS

Connectors

POWER OUT: (1) 3-prong grounded AC socket
Sensed AC power outlet
Fixed sensitivity intended for a typical television/monitor
Maximum Load: 6 Amps (700 Watts) at 120 Volts AC

IR: (1) 3.5mm mini phone jack female, IR/Serial output port
Connects to STIRP IR probe (included)
IR output up to 1.2 MHz
1-way serial TTL/RS-232 (0-5 Volts) up to 115.2k baud
Expandable via ST-SPL to control multiple disparate IR devices

I/O 1 - 4: (1) 5-pin 3.5mm detachable terminal block comprising (4) digital input/output or analog input ports (referenced to GND);
Digital Input: Rated for 0-24 Volts DC, input impedance 20k ohms, logic threshold 1.24 Volts DC;
Digital Output: 250 mA sync from maximum 24 Volts DC, catch diodes for use with "real world" loads
Analog Input: Rated for 0-10 Volts DC, protected to 24 Volts DC maximum, input impedance 20k ohms
Programmable 5 Volts, 2k ohms pull-up resistor per pin

RS-232: (1) 6-pin RJ11 female, bidirectional RS-232 com port
Up to 115.2K baud; hardware and software handshaking support

CRESNET: (1) 6-pin RJ11 female, Cresnet slave port
Connects to Cresnet control network

POWER IN: (1) 6 ft (1.83m) cable with grounded AC plug
Connects to 120 Volt AC power source

IR Receiver

IR Reception Frequency: 455kHz

IR Reception Angle: ~30° from center

LED Indicators

PWR: (green) Indicates power supplied from 120V AC power source

NET: (yellow) Indicates communication with Cresnet system

INPUT-OUTPUT (1-4): (4 red) Indicate input or output signals at I/O ports 1-4

TV/AV PWR: (green) Indicates load connected to AC power outlet is "on"

TV/AV IR: (red) Indicates transmission of data on IR port

RS-232 RXD: (red) Indicates reception of serial data at RS-232 port

RS-232 TXD: (red) Indicates transmission of serial data on RS-232 port

IR IN: (red) Indicates reception of a valid IR signal

Power Requirements

0.6 Amps, 120 Volts AC @ 60 Hz; plus connected device load up to 6 Amps additional

Cresnet Power Usage: 0 Watts

Enclosure

Black metal, 0.5U 19" rack-mountable using optional ST-RMK (sold separately)

Dimensions

Height: 1.80 in (4.57 cm), 1.70 in (4.32 cm) without feet

Width: 7.07 in (17.95 cm)

Depth: 6.32 in (16.06 cm)

Weight

3.63 lbs (1.65 kg)

AVAILABLE ACCESSORIES

▶ ST-RMK

Rack Mount Kit

▶ STCP-501

DB9M to RJ11 Adapter
(allows connection of CNSP-XX and other RS-232 serial cables)

▶ ST-SPL

Infrared (IR) Splitter

▶ ST-MB

"Master Blaster"
Infrared (IR) Sprayer

▶ CNRJ11

4-Wire Terminal Block to
RJ11 Cresnet Converter

Telephone Interface Module **CEN-TIA**

The CEN-TIA provides a telephone audio and control interface with useful features for home automation, multiroom audio distribution, and numerous other control system applications.

Speakerphone—The CEN-TIA connects directly to a standard phone line, or to your phone system's analog extension port to provide a single-line, half-duplex, push-to-talk speakerphone interface for any touchpanel with built-in microphone and speakers. Integrated with the C2N-IADS30X24 Intercom Distribution Switcher, the CEN-TIA can enable speakerphone capabilities for multiple touchpanels throughout the house.

Caller ID—See who's calling before you answer by displaying Caller ID information on every touchpanel. Manage missed calls easily with complete caller information and management options displayed on the touchpanel screen. Use the built-in address book to store phone numbers and addresses for all your contacts.

Telephone Paging—The CEN-TIA adds telephone paging capability to any Crestron Home® audio distribution system, allowing sophisticated zone-paging from any telephone to room speakers throughout the house.

Audio Signal Generator—Loaded with your own custom MP3 audio files, the CEN-TIA can be used to generate high-quality door chimes and alarm sounds, and even create unique telephone ring tones to identify known callers based on Caller ID. With memory capacity expandable up to 1 GB, the CEN-TIA can easily support several hours of full-frequency stereo audio files.

DTMF Control Interface—Use your mobile phone to remotely turn on lights, adjust air conditioning, and arm/disarm security. Using standard DTMF touch tones, the CEN-TIA affords telephone keypad control of any automation system function, providing a prompt-driven user-interface that's simple to use. The Menu Builder software tool makes it easy to set up a menu of friendly voice commands using the preloaded voice prompts, or your own custom audio files, for personalized remote control of your home or office. The CEN-TIA can also dial out to your mobile phone to alert you to an alarm condition or other system event.



- Half-duplex speakerphone with Caller ID
- Telephone paging for multiroom audio systems
- Custom door chime, ringer and alarm sounds
- Remote control access from any phone
- Personalized voice prompts
- Easy setup via phone or Menu Builder software

SPECIFICATIONS

Audio

Frequency Response (@ AUDIO OUT):

- 20Hz to 20kHz ± 0.5 dB from MP3 file or AUDIO IN sources
- 300Hz to 3KHz -3dB from PHONE LINE source
- 300Hz to 3KHz -3dB from WAV file messages

Frequency Response (PHONE LINE): 300Hz to 3KHz -3dB

Signal/Noise Ratio: 94 dB A-weighted at AUDIO OUT

THD + N: 0.05% A-weighted at AUDIO OUT

MP3 File Support: 44.1 kHz sampling rate, up to 128 Kb/s bit rate

WAV File Support: 16-bit PCM, mono, 8 kHz sampling rate

Memory

Multimedia Memory Card: 32 MB included, 1 GB maximum
Stores audio files

Connectors

PHONE LINE: 6-pin RJ11 female

Connects to single-line POTS telephone line or analog extension port

LAN: (1) 8-wire RJ45 with 2 LED indicators

10/100BaseT Ethernet port, auto-negotiating

Green LED indicates link status

Yellow LED indicates Ethernet activity

MEMORY: (1) MMC compatible card slot

Accepts multimedia memory card up to 1 GB (32 MB included)

AUDIO IN: (1) 5-pin 3.5mm detachable terminal block

Balanced/unbalanced stereo line-level audio input

Input Impedance: 20k ohms balanced, 10k ohms unbalanced

Maximum Input Level: 4 V_{RMS} balanced, 2 V_{RMS} unbalanced

> continued

CEN-TIA Telephone Interface Module (continued)

AUDIO OUT: (1) 3-pin 3.5mm detachable terminal block
Balanced/unbalanced stereo line-level audio output
Output Impedance: 200 ohms balanced, 100 ohms unbalanced
Maximum Output Level: 4 V_{RMS} balanced, 2 V_{RMS} unbalanced

NET: (1) 4-pin 3.5mm detachable terminal block
Cresnet slave port, connects to Cresnet control network

G: (1) 6-32 screw, chassis ground lug

USB (front): (1) Type 'B' female, USB 1.1 port

Controls & LED Indicators

PWR: (1) green LED, indicates 24 Volts DC power supplied from Cresnet control network

NET: (1) yellow LED indicates communication with Cresnet system

ACT: (1) red LED, indicates internal processor activity

OFF HOOK: (1) miniature pushbutton and (1) green LED, initiates and indicates "off-hook" connection to phone line

LAN LINK: (1) green LED, indicates Ethernet link status

LAN ACT: (1) yellow LED, indicates Ethernet activity

SETUP (rear): (1) miniature pushbutton and (1) red LED, used for touch-settable ID (TSID)

Power Requirements

Cresnet Power Usage: 7 Watts (0.3 Amp @ 24 Volts DC)

Environmental

Temperature: 32° to 122°F (0° to 50°C)

Humidity: 10% to 90% RH (non-condensing)

Enclosure

Black metal, 0.5U 19" rack-mountable using optional ST-RMK (sold separately)

Dimensions

Height: 1.80 in (4.57 cm), 1.70 in (4.32 cm) without feet

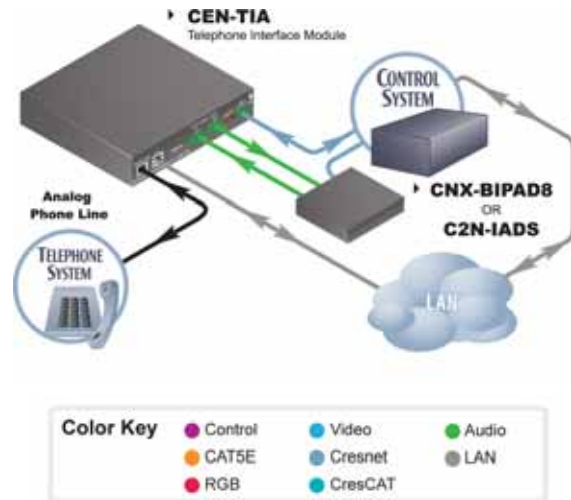
Width: 7.07 in (17.96 cm)

Depth: 6.37 in (16.16 cm)

Weight

1.8 lbs (0.9 kg)

Typical CEN-TIA Connections



AVAILABLE ACCESSORIES

- **ST-RMK**
Rack Mount Kit

Slide Projector Interface **CNSC-1A**

The CNSC-1A is a Cresnet slave device that provides a simple interface for control of Kodak® Ektagraph™, Kodak SA V, SIMDA and Electronic slide projectors. Functions include forward, reverse, focus, and power. The CNSC-1A also has inputs for slide lift and tray zero sense.

SPECIFICATIONS

Connectors

INPUTS: (1) 6-pin 5mm detachable terminal block comprising (5) digital inputs to accept contact closures for special functions

PROJ OUT: (1) 6-pin 5mm detachable terminal block

Primary control interface to the projector

Normally accepts connection from a 12 foot, 5-pin EBY slide projector control cable (included)

NET: (1) 4-pin 5mm detachable terminal block, Cresnet slave port
Connects to Cresnet control network

120 VAC: (1) grounded AC socket, switched projector power outlet
Maximum Load: 1800 Watts @ 120 Volts AC

Controls

AC OUT: (1) Recessed pushbutton

Momentarily engages AC power to the projector when pressed

ID CODE: (2) Rotary DIP Switches for setting the Cresnet ID

LED Indicators

AC OUT: Indicates projector power outlet is switched on

NET PWR: Indicates 24 Volts DC power supplied from Cresnet control network

Power Requirements

Cresnet Power Usage: 3 Watts (0.125 Amps @ 24 Volts DC)

Dimensions

Height: 1.95 in (4.95 cm)

Width: 7.81 in (19.83 cm)

Depth: 7.65 in (19.42 cm)

Weight

2.05 lbs (0.9 kg)



CNMK Mouse and Keyboard Control Interface



The CNMK is a Cresnet expansion module that provides a PS/2 or USB interface between the Crestron control system and a Windows® based PC. The CNMK allows mouse and keyboard commands to be executed from the control system and sent to the computer to control software applications. Using the CNMK it is possible to display the equivalent of a QWERTY keyboard directly on any large touchpanel to allow manual real-time text entry directly from the touchpanel screen. Select keyboard commands can be assigned to buttons on any handheld remote to control computer-based slide presentations. Macros can be easily programmed to execute a string of commands.

The CNMK includes pass-through connectors to enable the simultaneous connection of a standard or wireless PS/2 keyboard and mouse. The CNMK may also be interfaced to a single USB port on the PC using the PS/2-to-USB Y-adaptor included. The CNMK may be rack-mounted using the optional ST-RMK rack mount kit (sold separately). Communication with the control system is via a single Cresnet connection.

SPECIFICATIONS

Connectors

KEYBOARD: (1) 6-pin mini DIN female, PS/2 keyboard input port
Keyboard commands pass through to computer's PS/2 keyboard port

TO KEYBOARD PORT: (1) 6-pin mini DIN female
PS/2 keyboard output port
Connects to computer's PS/2 keyboard port via supplied cable, or
Connects to a single USB port via supplied PS/2-to-USB Y-adaptor

MOUSE: (1) 6-pin mini DIN female, PS/2 mouse input port
Mouse commands pass through to computer's PS/2 mouse port

TO MOUSE PORT: (1) 6-pin mini DIN female
PS/2 mouse output port
Connects to computer's PS/2 mouse port via supplied cable, or
Connects to a single USB port via supplied PS/2-to-USB Y-adaptor

NET: (2) 6-pin RJ11 female, Cresnet slave ports, paralleled
Connects to Cresnet control network

12VDC: (1) 2.5 mm barrel DC power jack
12 Volt DC power input (PW-1205 power supply included)

LED Indicators

PWR: (green) Indicates power supplied from Cresnet control network or 12VDC power jack

NET: (yellow) Indicates communication with Cresnet system

MOUSE: Indicates mouse activity

KEYBOARD: Indicates keyboard activity

Power Requirements

12VDC: 6 Watts (0.5 Amps) @ 12 Volts DC

Power Supply (PW-1205 included): 120 Volts AC, 60 Hz

Cresnet Power Usage: 3 Watts (0.125 Amp @ 24 Volts DC)
with no power supply connected to the 12VDC connector

Environmental

Temperature: 32° to 113°F (0° to 45°C)

Humidity: 10% to 90% RH (non-condensing)

Enclosure

Black metal, 0.5U 19" rack-mountable using optional ST-RMK (sold separately)

Dimensions

Height: 1.80 in (4.57 cm), 1.70 in (4.32 cm) without feet

Width: 7.07 in (17.95 cm)

Depth: 6.32 in (16.06 cm)

Weight

2.0 lbs (0.93 kg)

INTERNATIONAL VERSION (230 VAC)

CNMKI

All the features and specifications of the CNMK except:

Power Requirements

12VDC: 6 Watts (0.5 Amps) @ 12 Volts DC

Power Supply (PW-1210RU included): 230 Volts AC, 50 Hz

Cresnet Power Usage: 3 Watts (0.125 Amp @ 24 Volts DC)
with no power supply connected to the 12VDC connector

INCLUDED ACCESSORIES

PW-1205 (or PW-1210RU)

12 Volt Power Pack

AVAILABLE ACCESSORIES

► **ST-RMK**
Rack Mount Kit

► **CNRJ11**
4-Wire Terminal Block to
RJ11 Cresnet Converter

Video Sensor Module **ST-VS**

The ST-VS is a Cresnet expansion module that is used to sense the presence of baseband video signals from up to four separated devices such as VCR's and DVD players. A typical application for video sensing is to provide confirmation of a device's power on/off state. This is often necessary to enable reliable power control for IR controlled devices that do not include discrete power commands in their IR control protocol. The ST-VS may be used to provide a video sensing interface wherever required, and may be rack-mounted using the optional ST-RMK rack mount kit (sold separately). Communication with the control system is via a single Cresnet connection.

SPECIFICATIONS

Connectors

VIDEO 1 - 4: (8) RCA female comprising (4) non-terminating composite video inputs with unbuffered pass-thru;
Senses video or unbalanced audio signals
Threshold: $\geq 0.5 V_{P-P}$
Maximum Input: $2 V_{RMS}$

NET: (2) 6-pin RJ11 female, Cresnet slave ports, paralleled
Connect to Cresnet control network

12VDC: (1) 2.5 mm barrel DC power jack
12 Volt DC power input (PW-1205 power supply included)

LED Indicators

PWR: (green) Indicates power supplied from Cresnet control network or 12VDC power jack

NET: (yellow) Indicates communication with Cresnet system

VIDEO (1-4): (4 red) Indicate presence of input signals

Power Requirements

12VDC: 6 Watts (0.5 Amps) @ 12 Volts DC

Power Supply (PW-1205 included): 120 Volts AC, 60 Hz

Cresnet Power Usage: 3 Watts (0.125 Amp @ 24 Volts DC)
with no power supply connected to the 12VDC connector

Enclosure

Black metal, 0.5U 19" rack-mountable using optional ST-RMK
(sold separately)

Dimensions

Height: 1.80 in (4.57 cm), 1.70 in (4.32 cm) without feet

Width: 7.07 in (17.95 cm)

Depth: 6.32 in (16.06 cm)

Weight

1.92 lbs (0.87 kg)



INTERNATIONAL VERSION (230 VAC)

STI-VS

All the features and specifications of the ST-VS except:

Power Requirements

12VDC: 6 Watts (0.5 Amps) @ 12 Volts DC

Power Supply (PW-1210RU included): 230 Volts AC, 50 Hz

Cresnet Power Usage: 3 Watts (0.125 Amp @ 24 Volts DC)
with no power supply connected to the 12VDC connector

INCLUDED ACCESSORIES

PW-1205 (or PW-1210RU)

12 Volt Power Pack

AVAILABLE ACCESSORIES

► ST-RMK

Rack Mount Kit

► CNRJ11

4-Wire Terminal Block to
RJ11 Cresnet Converter

ST-CS Dual Current Sensor Module



The ST-CS is a Cresnet expansion module that provides power sensing of two individual devices such as televisions, AV receivers, or nearly any other AC powered device. A typical application for current sensing is to provide confirmation of the device's power on/off state. This is often necessary to enable reliable power control for IR controlled devices that do not include discrete power commands in their IR control protocol. The ST-CS may be used to provide a current sensing interface wherever required for loads up to 1000 Watts, and may be rack-mounted using the optional ST-RMK rack mount kit (sold separately). Communication with the control system is via a single Cresnet connection.

SPECIFICATIONS

Connectors

- POWER A&B:** (2) 3-prong grounded AC sockets
Sensed AC power outlets
Maximum Total Load: 10 Amps (1000 Watts) at 120 Volts AC
Minimum Sensing Load: 0.033 Amps (4 Watts) at 120 Volts AC
Voltage Range: 0 to 220 Volts AC @ 45-65Hz
- POWER IN:** (1) 6 ft (1.83m) cable with grounded AC plug
Connects to AC power source
- NET:** (2) 6-pin RJ11 female, Cresnet slave ports, paralleled
Connect to Cresnet control network
- 12VDC:** (1) 2.5 mm barrel DC power jack
12 Volt DC power input (PW-1205 power supply included)

LED Indicators and Adjustments

- PWR:** (green LED) Indicates power supplied from Cresnet control network or 12VDC power jack

- NET:** (yellow LED) Indicates communication with Cresnet system
- FULL (A&B):** (2 recessed trim pots and red LEDs) Adjust "full load" threshold
- PARTIAL (A&B):** (2 recessed trim pots and yellow LEDs) Adjust "partial load" threshold

Power Requirements

- 12VDC:** 6 Watts (0.5 Amps) @ 12 Volts DC
- Power Supply (PW-1205 included):** 120 Volts AC, 60 Hz
- Cresnet Power Usage:** 3 Watts (0.125 Amp @ 24 Volts DC)
with no power supply connected to the 12VDC connector

Enclosure

- Black metal, 0.5U 19" rack-mountable using optional ST-RMK (sold separately)

Dimensions

- Height:** 1.80 in (4.57 cm), 1.70 in (4.32 cm) without feet
- Width:** 7.07 in (17.95 cm)
- Depth:** 6.32 in (16.06 cm)

Weight

- 2.72 lbs (1.24 kg)

INTERNATIONAL VERSION (230 VAC)

STI-CS

- All the features and specifications of the ST-CS except:

Connectors

- POWER A&B:** (2) 6 ft (1.83m) cables with inline female IEC connector, sensed AC power outlets
Maximum Total Load: 6 Amps, 1000 Watts at 220 Volts AC
Voltage Range: 0 to 220 Volts AC @ 45-65Hz

Power Requirements

- 12VDC:** 6 Watts (0.5 Amps) @ 12 Volts DC
- Power Supply (PW-1210RU included):** 230 Volts AC, 50 Hz
- Cresnet Power Usage:** 3 Watts (0.125 Amp @ 24 Volts DC)
with no power supply connected to the 12VDC connector

Weight

- 2.92 lbs (1.33 kg)

INCLUDED ACCESSORIES

- PW-1205 (or PW-1210RU)**
12 Volt Power Pack

AVAILABLE ACCESSORIES

- **ST-RMK**
Rack Mount Kit
- **CNRJ11**
4-Wire Terminal Block to
RJ11 Cresnet Converter

Economical AC Current Sensor **CNCS**

The CNCS provides power sensing of any single AC powered device or AC load up to 1000 Watts. A current sensor is typically used with any television, AV receiver, etc. to provide confirmation of the device's power on/off state. This is often necessary to enable reliable power control for IR controlled devices that do not include discrete power commands in their IR control protocol.

The CNCS provides true power status feedback to the control system via a pair of low-voltage contact closures, which may be connected directly to Versiports or other digital input ports on any Crestron control system, room box, expansion module, etc. Although the CNCS is not a Cresnet device, it does require power (24 and G) from the Cresnet bus.

SPECIFICATIONS

Connectors

AC OUTPUT: (1) 3-prong grounded AC socket
Sensed AC power outlet
Maximum Load: 8.5 Amps(1000 Watts) at 120 Volts AC
Minimum Sensing Load: 0.033 Amps(4 Watts) at 120 Volts AC
Voltage Range: 0 to 220 Volts AC @ 45-65Hz

AC INPUT: (1) Attached cable with grounded AC plug
Connects to AC power source

24+/F/P/C/GND: (1) 5-pin 5mm detachable terminal block
24+: DC power input, connects to the '24' terminal of the Cresnet bus
F: Relay output, latches when "Full" threshold has been exceeded;
P: Relay output, latches when "Partial" threshold has been exceeded;
C: Floating common for "F" and "P"
GND: Ground, connects to the 'G' terminal of the Cresnet bus
Relay outputs rated 1 Amp @ 24 Volts AC/DC referenced to "C"
The CNCS must not be connected to the 'Y' or 'Z' terminals of the Cresnet Bus



LED Indicators and Adjustments

PWR: (green LED) Indicates 24V DC power supplied to unit
FULL LOAD: (Recessed trim pot and red LED) Adjusts "full load" threshold

PARTIAL LOAD: (Recessed trim pot and yellow LED) Adjusts "partial load" threshold

Power Requirements

Cresnet Power Usage: 3 Watts (0.125 Amp @ 24 Volts DC)
Note: CNCS must not be connected to the 'Y' or 'Z' terminals of the Cresnet Bus

Enclosure

Black metal

Dimensions

Height: 1.77 in (4.49 cm)
Width: 4.32 in (10.98 cm)
Depth: 4.33 in (10.99 cm)

Weight

1.8 lbs (0.8 kg)

ST-PC Dual Power Control Module



The ST-PC is a Cresnet expansion module that provides switching of AC power to two individual loads for on/off control of video monitors, cassette decks, small audio amplifiers, and other AC powered devices. The ST-PC may be used to provide a power control interface wherever required for loads up to 1200 Watts, and may be rack-mounted using the optional ST-RMK rack mount kit (sold separately). Communication with the control system is via a single Cresnet connection.

SPECIFICATIONS

Connectors

POWER A&B: (2) 3-prong grounded AC sockets
Switched AC power outlets
Maximum Load per Outlet: 10 Amps at 120 Volts AC tungsten load
Maximum Load Total: 10 Amps at 120 Volts AC

POWER IN: (1) 6 ft (1.83m) cable with grounded AC plug
Connects to AC power source

NET: (2) 6-pin RJ11 female, Cresnet slave ports, paralleled
Connect to Cresnet control network

12VDC: (1) 2.5 mm barrel DC power jack
12 Volt DC power input (PW-1205 power supply included)

LED Indicators and Switches

PWR: (green LED) Indicates power supplied from Cresnet control network or 12VDC power jack

NET: (yellow LED) Indicates communication with Cresnet system

POWER (A&B): (2 recessed miniature pushbuttons and red LEDs)
Pushbuttons alternately turn power outlets on/off when control system is inactive, produce momentary button presses when control system is active; LED's indicate when outlets are "on"

Power Requirements

12VDC: 6 Watts (0.5 Amps) @ 12 Volts DC

Power Supply (PW-1205 included): 120 Volts AC, 60 Hz

Cresnet Power Usage: 4 Watts (0.167 Amp @ 24 Volts DC)
with no power supply connected to the 12VDC connector

Enclosure

Black metal, 0.5U 19" rack-mountable using optional ST-RMK (sold separately)

Dimensions

Height: 1.80 in (4.57 cm), 1.70 in (4.32 cm) without feet

Width: 7.07 in (17.95 cm)

Depth: 6.32 in (16.06 cm)

Weight

2.7 lbs (1.15 kg)

INTERNATIONAL VERSION (230 VAC)

STI-PC

All the features and specifications of the ST-PC except:

Connectors

POWER A&B: (2) 6 ft (1.83m) cables with inline female IEC connector, switched AC power outlets

Maximum Load per Outlet: 5 Amps at 250 Volts AC

Maximum Load Total: 6 Amps at 250 Volts AC

Power Requirements

12VDC: 6 Watts (0.5 Amps) @ 12 Volts DC

Power Supply (PW-1210RU included): 230 Volts AC, 50 Hz

Cresnet Power Usage: 4 Watts (0.167 Amp @ 24 Volts DC)
with no power supply connected to the 12VDC connector

Weight

2.8 lbs (1.3 kg)

INCLUDED ACCESSORIES

PW-1205 (or PW-1210RU)

12 Volt Power Pack

AVAILABLE ACCESSORIES

► **ST-RMK**
Rack Mount Kit

► **CNRJ11**
4-Wire Terminal Block to
RJ11 Cresnet Converter

Power Control Interface **CNPC-1A**

The CNPC-1A provides on/off switching of AC power to any single device or load up to 1800 Watts. The CNPC-1A may be controlled from any relay port or Versiport. A 3-position switch on its front panel may be used to manually force power on, or to send a momentary low-voltage contact closure signal to the control system to trigger a "power up" command. Although the CNPC-1A is not a Cresnet device, it does require DC power (24 and G) from the Cresnet bus.

SPECIFICATIONS

Connectors

AC OUTPUT: (1) 3-prong grounded AC socket
Switched AC power outlet

Maximum Load: 15 Amps at 120 Volts AC tungsten load

AC INPUT: (1) Attached cable with grounded AC plug
Connects to AC power source

24V/IN/SW/C: (1) 4-pin 5mm detachable terminal block

24V: DC power input, connects to the '24' terminal of the Cresnet bus;

IN: Control input, connects to any Versiport digital output, or any relay port referenced to system ground;

SW: Contact closure output, connects to any Versiport or other digital input port;

C: Common, connects to the 'G' terminal of the Cresnet bus;

The CNPC-1A must not be connected to the 'Y' or 'Z' terminals of the Cresnet Bus

LED Indicators

PWR: Indicates that the power relay is engaged

24V: Indicates that 24 Volts DC is supplied to the unit

Switch

ON: Produces a latched contact closure between the "IN" and "C" terminals, and closes the internal power relay

(Center): Normal position, allows control from an external closure across the "IN" and "C" terminals

SW: Produces a momentary contact closure between the "SW" and "C" terminals while held



Power Requirements

Cresnet Power Usage: 1.5 Watts (0.063 Amp @ 24 Volts DC)

Note: CNPC-1A must **not** be connected to the 'Y' or 'Z' terminals of the Cresnet Bus

Enclosure

Black metal

Dimensions

Height: 1.87 in (4.74 cm)

Width: 4.20 in (10.67 cm)

Depth: 4.20 in (10.67 cm)

Weight

1.3 lbs (0.6 kg)

CONTROL SYSTEMS

► Lutron® GRAFIK Eye® Interface

ST-LT Lutron® GRAFIK Eye® Interface Module



The ST-LT is a Cresnet expansion module that provides a direct interface to any Lutron GRAFIK Eye lighting system. The ST-LT negates the need to install the manufacturer's GRX-AV or GRX-RS232 interface, providing bidirectional communications between Lutron's Mux Link and Crestron's Cresnet bus. The ST-LT may be rack-mounted if required using the optional ST-RMK rack mount kit (sold separately).

SPECIFICATIONS

Connectors

MUX LINK: (1) 4-pin 5mm detachable terminal block
Connects to the Lutron Mux Link network

RS-232: (1) DB9 male, Lutron compatible RS-232 interface
Optional connection to a PC running Lutron software
Equivalent to Lutron's GRX-RS232 input

NET: (2) 6-pin RJ11 female, Cresnet slave ports, paralleled
Connect to Cresnet control network

12VDC: (1) 2.5 mm barrel DC power jack
12 Volt DC power input (PW-1205 power supply included)

LED Indicators

PWR: (green) Indicates power supplied from Cresnet control network or 12VDC power jack

NET: (yellow) Indicates communication with Cresnet system

SND: (red) Indicates transmission of data to the Mux Link network

RCV: (red) Indicates reception of data from the Mux Link network

CMD: (red) Indicates reception of data by the Mux Link network

POLL: (red) Indicates polling on the Mux Link network

PWR: (red) Indicates power supplied from Mux Link network

Power Requirements

12VDC: 6 Watts (0.5 Amps) @ 12 Volts DC

Power Supply (PW-1205 included): 120 Volts AC, 60 Hz

Cresnet Power Usage: 2.5 Watts (0.11 Amp @ 24 Volts DC)
with no power supply connected to the 12VDC connector

Enclosure

Black metal, 0.5U 19" rack-mountable using optional ST-RMK
(sold separately)

Dimensions

Height: Height: 1.80 in (4.57 cm), 1.70 in (4.32 cm) without feet

Width: 7.07 in (17.95 cm)

Depth: 6.32 in (16.06 cm)

Weight

2.1 lbs (0.953 kg)

INTERNATIONAL VERSION (230 VAC)

STI-LT

All the features and specifications of the ST-LT except:

Power Requirements

12VDC: 6 Watts (0.5 Amps) @ 12 Volts DC

Power Supply (PW-1210RU included): 230 Volts AC, 50 Hz

Cresnet Power Usage: 2.5 Watts (0.11 Amp @ 24 Volts DC)
with no power supply connected to the 12VDC connector

INCLUDED ACCESSORIES

PW-1205 (or PW-1210RU)

12 Volt Power Pack

AVAILABLE ACCESSORIES

► **ST-RMK**
Rack Mount Kit

► **CNRJ11**
4-Wire Terminal Block to
RJ11 Cresnet Converter

DISTRIBUTION BLOCKS

C2N-HBLOCK Multi-type Cresnet Distribution Block

The C2N-HBLOCK is a parallel distribution block for termination of multiple Cresnet cables. Three different types of connectors are provided to accommodate all types of Cresnet wiring including standard 4-wire Cresnet cable, CAT5/UTP mini-network cable, and RJ11 modular cables. Diagnostic LEDs indicate presence of network power and data. A mounting plate (included) provides for standalone surface mounting, or up to three units may be rack mounted together using the optional CNXRMAK (sold separately).

The C2N-HBLOCK is designed for transparent communications between all connected Cresnet devices and the control system. Multiple units may be cascaded for expanded connectivity.

SPECIFICATIONS

Connectors

NET A - E: (5) 4-pin 5mm detachable terminal blocks
Connect to standard 4-wire Cresnet cables

NET 1 - 8: (8) 4-pin 3.5mm detachable terminal blocks
Connect to standard 4-wire or CAT5/UTP mini-network Cresnet cables

NET a - c: (3) 6-pin RJ11 female
Connect to RJ11 modular Cresnet cables

LED Indicators

PWR: (Green) indicates that 24VDC Cresnet power is supplied (at any port)

Y: (Red) Indicates presence and integrity of the Cresnet "Y" data signal

Z: (Red) Indicates presence and integrity of the Cresnet "Z" data signal

Enclosure

Black metal, surface mount box with removable mounting plate



Dimensions

Including mounting plate:

Height: 1.27 in (3.23 cm)

Width: 6.55 in (16.64 cm)

Depth: 4.30 in (10.92 cm)

Weight

0.68 lbs (0.31 kg) including all supplied terminal block connectors

AVAILABLE ACCESSORIES

CNXRMAK

Rack Mount Kit

DISTRIBUTION BLOCKS

CNTBLOCK Cresnet Distribution Block

The CNTBLOCK is a parallel distribution block for termination of multiple 4-wire Cresnet cables. Eight 4-pin connectors are provided, grouped in two sets of four. Power can be isolated between the two sets by removing an internal jumper. Diagnostic LEDs indicate presence of network power and data. The compact CNTBLOCK is designed for surface mounting, and includes integral mounting flanges.



SPECIFICATIONS

Connectors

NET 1 - 8: (8) 4-pin 5mm detachable terminal blocks
Connect to standard 4-wire Cresnet cables

LED Indicators

PWR: (Green) indicates that 24VDC Cresnet power is present

Y: (Red) Indicates presence and integrity of the Cresnet "Y" data signal

Z: (Red) Indicates presence and integrity of the Cresnet "Z" data signal

Enclosure

Black metal, surface mount box with (2) integral mounting flanges

Dimensions

Height: 0.92 in (2.33 cm)

Width: 5.75 in (14.61 cm)

Depth: 1.89 in (4.81 cm)

Weight

0.5 lb (0.2 kg)

DISTRIBUTION BLOCKS

CNRJ11 4-Wire Terminal Block to RJ11 Cresnet Converter

The CNRJ11 is a 1-1 converter used to adapt between a standard 4-wire Cresnet cable and a modular Cresnet cable. One 4-pin connector and one 6-pin RJ11 jack are provided, wired in parallel. The CNRJ11 is a useful accessory for wiring standard 4-wire Cresnet cable to certain control modules, pan/tilt heads, and SmarTouch wired touchpanels that utilize an RJ11 NET connector.



SPECIFICATIONS

Connectors

NET: (1) 4-pin 5mm detachable terminal block
Connects to standard 4-wire Cresnet cables

NET: (1) 6-pin RJ11 female
Connects to RJ11 modular Cresnet cables

LED Indicators

PWR: (Green) indicates that 24VDC Cresnet power is present

Enclosure

Black metal, surface mount box with (2) integral mounting flanges

Dimensions

Height: 1.24 in (3.14 cm)

Width: 3.25 in (8.26 cm)

Depth: 2.00 in (5.08 cm)

Weight

0.3 lb (0.15 kg)

DISTRIBUTION BLOCKS

ST-CNB Modular Cresnet Distribution Block

The ST-CNB is an expanded version of the CNRJ11, providing two 4-pin Cresnet connectors and four 6-pin RJ11 jacks, all wired in parallel.

SPECIFICATIONS

Connectors

NET 1 - 2: (2) 4-pin 5mm detachable terminal blocks
Connect to standard 4-wire Cresnet cables

NET 3 - 6: (4) 6-pin RJ11 female
Connect to RJ11 modular Cresnet cables

LED Indicators

PWR: (Green) indicates that 24VDC Cresnet power is present

Enclosure

Black metal, surface mount box with (2) integral mounting flanges

Dimensions

Height: 1.16 in (2.95 cm)

Width: 4.25 in (10.80 cm)

Depth: 1.97 in (5.00 cm)

Weight

0.45 lbs (0.2 kg)



Cresnet Hub/Repeater **CNXHUB**

The CNXHUB is a 6-port Cresnet hub/repeater module, which serves as a repeater and splitter for large Cresnet networks. Each of the six ports (or segments) has a dedicated driver/receiver. Use of a Cresnet hub/repeater is advised whenever the number of touchpanels and other high-traffic Cresnet devices on a network exceeds 20, or when the combined total length of Cresnet cable exceeds 3000 feet. The CNXHUB may be rack-mounted using the optional ST-RMK rack mount kit (sold separately).

SPECIFICATIONS

Connectors

NET A - F: (6) 4-pin 3.5mm detachable terminal blocks Cresnet hub/repeater ports

LED Indicators

PWR: Indicates 24 Volts DC Cresnet power is supplied to unit at any port

NET ACTIVITY (A-F): Indicates activity from any device on a given segment

Power Requirements

Cresnet Power Usage: 2 Watts (0.084 Amp @ 24 Volts DC)

Enclosure

Black metal, 0.5U 19" rack-mountable using optional ST-RMK (sold separately)

Dimensions

Height: 1.80 in (4.57 cm), 1.70 in (4.32 cm) without feet

Width: 7.07 in (17.95 cm)

Depth: 6.32 in (16.06 cm)

Weight

1.91 lbs (0.86 kg)



AVAILABLE ACCESSORIES

- **ST-RMK**
Rack Mount Kit

C2N-NPA8 Cresnet Network Poll Accelerator



The C2N-NPA8 Cresnet Network Poll Accelerator works with a 2-Series control system to maintain a high level of performance and reliability for systems having a large number of Cresnet devices. The C2N-NPA8 effectively multiplies Cresnet bandwidth by implementing eight simultaneous Cresnet networks or "segments." Each segment operates independently to maintain full Cresnet bandwidth and provide isolation from network faults. In addition, each segment has a "network analyzer" built in to provide instantaneous network analysis.

For convenience, four 4-pin Cresnet connectors are provided for each segment, thirty-two in all. The C2N-NPA8 interfaces with the control system via high-speed RS-422 through a designated COM port, or by 10/100BaseT Ethernet.

The C2N-NPA8 can be installed in a Crestron CAEN Automation Enclosure using the optional CAEN-MK (sold separately), or rack mounted using the optional C2N-RMAK (sold separately). The C2N-NPA8 is designed to install along with the C2N-SPWS300 300 Watt Cresnet power supply to provide a clean, convenient centralized distribution solution for wiring large Cresnet networks.

SPECIFICATIONS

Connectors

NET A - H: (32) 4-pin 3.5mm detachable terminal blocks providing (4) paralleled Cresnet ports per each of (8) segments

PWR (NET A - H): (8) 3-pin 3.5mm detachable terminal blocks providing (1) Cresnet power connector per each of (8) segments; Receives 24 Volts DC from external Cresnet power supply to power Cresnet devices connected to the NET ports; The C2N-NPA8 is powered from the power supply connected to the NET A or B PWR connector

LAN: (1) 8-wire RJ45 female, 10/100BaseT Ethernet port

COMPUTER: (1) DB9 female, RS-232 computer console port

COM: (1) DB9 female, RS-422 connection to control system

LED Indicators

PWR (A-H): (8) Indicate 24V DC power present on segments A-H

NET (A-H): (8) Indicate Cresnet activity on segments A-H

MSG: Indicates poll accelerator has generated an error message

LNK: Indicates a valid connection on LAN port

ACT: Indicates activity on LAN port

Power Requirements

Cresnet Power Usage: 10 Watts
(0.42 Amps @ 24 Volts DC)

Environmental

Temperature: 41° to 113°F (5° to 45°C)

Humidity: 10% to 90% RH (non-condensing)

Enclosure

Black anodized aluminum, surface mount box

Rack Mount: 3U 19" rack-mountable using C2N-RMAK (sold separately)

CAEN Automation Enclosure: Occupies 1 module space in a single-width enclosure, or 2 side-by-side module spaces in a double-width enclosure; requires CAEN-MK (sold separately)

Dimensions

Height: 5.19 in (13.18 cm)

Width: 13.25 in (33.66 cm)

Depth: 3.42 in (8.69 cm)

Weight

1.91 lbs (0.87 kg)

AVAILABLE ACCESSORIES

► **C2N-RMAK**
Rack Mount Kit

► **CAEN-MK**
CAEN Automation
Enclosure Mounting Kit

► **C2N-SPWS300**
300 Watt Cresnet
Power Supply

75 Watt Cresnet Power Supply **CNPWS-75**

The CNPWS-75 is a 75 Watt, 24 Volt regulated power supply for powering Cresnet control systems and devices. Two 4-pin network connectors are provided, wired in parallel to provide for versatile connectivity with pass-thru of the Cresnet data signal. The output is fuse protected. Up to three CNPWS-75 power supplies may be rack mounted together using the optional CNXRMAK (sold separately).

SPECIFICATIONS

Load Rating

75 Watts (3.125 Amps) @ 24 Volts DC regulated

Ripple / Noise: <300 mV

Load Protection: 4A, 250V, Time Lag fuse

Power Requirements

2.3 Amps, 100-240 Volts AC, 50/60 Hz

Connectors

NET: (2) 4-pin 5mm detachable terminal blocks

Cresnet power output ports, paralleled

Cresnet data 'Y' and 'Z' terminals pass-through only

Power: (1) IEC320 Socket

Mates with removable power cord, included

LED Indicators

NET POWER: Indicates 24 Volts DC at both Cresnet power ports, extinguished when fuse is blown

Environmental

Temperature: 41° to 104°F (5° to 40°C)

Humidity: 10% to 90% RH (non-condensing)

Enclosure

Black metal, 2U 19" rack-mountable using optional CNXRMAK (sold separately)

Dimensions

Height: 2.55 in (6.48 cm)

Width: 4.74 in (12.05 cm)

Depth: 8.07 in (20.50 cm)

Weight

2.30 lbs (1.10 kg)



INTERNATIONAL VERSION (230 VAC)

CNPWSI-75

All the features and specifications of the CNPWS-75 except removable power cord is provided without connector

AVAILABLE ACCESSORIES

- **CNXRMAK**
Rack Mount Kit

C2N-SPWS300 300 Watt Cresnet Power Supply



Crestron control systems can put a friendly face on any complete integrated AV or automation solution. To support the myriad touchpanels, keypads, and other peripherals that make up a control system, the C2N-SPWS300 provides a convenient and compact centralized power and termination solution.

Intelligent Power Distribution—The C2N-SPWS300 is a 300 Watt regulated power supply designed for powering a large network of Cresnet devices. Power is supplied on eight individually managed outputs. Each output is rated for up to 75 Watts, with a total system rating of 300 Watts. Electronic circuit breaker protection is provided on every output, which can be individually monitored and reset from the control system. The voltage level at each output can even be monitored along with ambient temperature and fault status for the complete power supply system.

Sequential Switching—To minimize current inrush upon startup, the C2N-SPWS300 implements sequential switching of its eight outputs. The startup process may be activated automatically when AC power is applied, or when 24 Volts DC is sensed coming from the control system or another power supply.

Cresnet Distribution—Connected to the Master port of any 2-Series Crestron control system, the C2N-SPWS300 provides a total Cresnet distribution solution. Carrying both data and power, the 16 Cresnet ports afford great flexibility for the termination of numerous Cresnet devices, with easy expansion using C2N-HBLOCK termination blocks. It is also ideally designed to enhance the built-in Cresnet distribution capabilities of the PAC2 Professional Automation Control System.

Versatile Mounting Options—The C2N-SPWS300 can be installed in a Crestron CAEN Automation Enclosure using the optional CAEN-MK (sold separately), or rack mounted using the optional C2N-RMAK (sold separately). Alternately, the C2N-SPWS300 may simply be placed on a shelf or mounted to any vertical surface using its built-in mounting flanges.

- 300 Watt regulated power supply
- 8 independently managed outputs
- 16 Cresnet distribution ports
- Cresnet monitoring and control
- Expands the Cresnet power and distribution capabilities of any 2-Series control system

SPECIFICATIONS

Load Ratings

Per Channel: 75 Watts (3.125 Amps) @ 24 Volts DC regulated
System Total: 300 Watts (12.5 Amps) @ 24 Volts DC regulated
Ripple / Noise: <150 mV

Load Protection: Electronic circuit breaker per channel, each rated at 75 watts nominal / 100 watts maximum; 4 Amp, 125V internal fuse; all channels shut off in case of total system overload

Sequential Startup: Outputs activate sequentially when power supply system is enabled (see PWR ON, PWR OFF/S�AVE control)

Power Requirements

4 Amps, 100-240 Volts AC, 50/60 Hz

Connections

1 – 8: (16) 4-pin 5mm detachable terminal blocks comprising (2) paralleled Cresnet ports per each of (8) output channels; 24 Volt DC power outputs with Cresnet data pass-thru from NET port

NET: (1) 4-pin 5mm detachable terminal block
 Ordinarily connects to the Master Cresnet port of a control system
 Cresnet data 'Y' and 'Z' terminals pass through to ports 1 – 8
 Applying 24 Volts DC to the '24' and 'G' terminals enables the power supply system when in "SLAVE" mode

Power: (1) attached input power cable (~1 ft long) with inline IEC320 socket;
 Connects to grounded AC power source using 3-prong power cable or pigtail cable, both provided

Controls

PWR ON, PWR OFF/S�AVE: (1) rocker switch; enables/disables the power supply system if no external DC voltage is applied to the NET port, or selects "SLAVE" mode to allow enabling the power supply system remotely by applying an external 24V DC signal to the NET port

RESET 1 – 8: (8) miniature pushbuttons; each resets its respective output channel, or momentarily disables the channel while held

SYSTEM RESET: (1) miniature pushbutton; resets all output channels sequentially, or momentarily disables all channels while held

SETUP: (1) miniature pushbutton; used for touch-settable ID (TSID)

300 Watt Cresnet Power Supply **C2N-SPWS300**

LED Indicators

PWR 1 – 8: (green) Indicate 24V DC power present at each channel output

OVRLD 1 – 8: (red) Indicate a load in excess of 75 watts on a given channel, channel output disabled

SYSTEM OVRLD: (red) Indicates a total load in excess of 300 watts on the power supply system, all channels disabled

PWR: (green) Indicates power supply system is enabled

NET: (yellow) Indicates communication with Cresnet system

SETUP: (red) Used for touch-settable ID (TSID)

Environmental

Temperature: 41° to 104°F (5° to 40°C)

Humidity: 10% to 90% RH (non-condensing)

Enclosure

Black anodized aluminum, surface mount box with (2) integral mounting flanges

Rack Mount: 3U 19" rack-mountable using C2N-RMAK (sold separately)

CAEN Automation Enclosure: Occupies 1 module space in a single-width enclosure, or 2 side-by-side module spaces in a double-width enclosure; requires CAEN-MK (sold separately)

Dimensions

Height: 5.19 in (13.18 cm)

Width: 13.25 in (33.66 cm)

Depth: 3.29 in (8.36 cm)

Weight

5.3 lbs (2.4 kg)

AVAILABLE ACCESSORIES

► **CNXRMAK**
Rack Mount Kit

► **CAEN-MK**
CAEN Automation
Enclosure Mounting Kit

► **C2N-NPA8**
Cresnet Network
Poll Accelerator

ACCESSORY POWER SUPPLIES

PW-2410RU Regulated Universal Power Pack 24VDC, 1A (25 Watts)

The PW-2410RU is a 1 Amp regulated power supply designed to provide 24 Volts DC to power some models of Crestron control systems. Generally, the PW-2410RU may be used to power nearly any Cresnet device(s) provided the total combined power factor does not exceed 25 Watts. For US/International use.

SPECIFICATIONS

Connectors

24VDC: (1) Attached cable with 2.1 mm barrel-type male DC connector, center pin +;
Rated for 25 Watts (1 Amp @ 24 Volts DC) regulated

Power: (1) IEC320 Socket
Mates with removable power cord, included

Power Requirements

100-250 Volts AC, 50/60 Hz

Enclosure

Black plastic, desktop



PW-2420RU Regulated Universal Power Pack 24VDC, 2A (50 Watts)

The PW-2420RU is a 2 Amp regulated power supply designed to provide 24 Volts DC to power some models of Crestron control systems and touchpanels. Generally, the PW-2420RU may be used to power nearly any Cresnet device(s) provided the total combined power factor does not exceed 50 Watts. For US/International use.

SPECIFICATIONS

Connectors

24VDC: (1) Attached cable with 2.1 mm barrel-type male DC connector, center pin +;
Rated for 50 Watts (2 Amp @ 24 Volts DC) regulated

Power: (1) IEC320 Socket
Mates with removable power cord, included

Power Requirements

100-250 Volts AC, 50/60 Hz

Enclosure

Black plastic, desktop



ACCESSORY POWER SUPPLIES

12 Volt Power Packs

Crestron 12 Volt power packs are designed to provide 12 Volts DC to power various Cresnet expansion modules, wireless touchpanels, battery chargers, and other Crestron products.

AVAILABLE MODELS

US (120 Volts AC, 60 Hz)

PW-1205

Wall-Mounted Power Pack 12VDC, 0.5A

PW-1210

Wall-Mounted Power Pack 12VDC, 1A

PW-1215

Wall-Mounted Power Pack 12VDC, 1.5A

INTERNATIONAL VERSIONS (230 Volts AC, 50 Hz)

PW-1210RU

Desktop Power Pack 12VDC, 1A Regulated

PWI-1215

Desktop Power Pack 12VDC, 1.5A

RACK MOUNT KITS

CNXRMAK Rack Mount Kit for C2N-HBLOCK and CNPWS-75

The CNXRMAK is a 2-space rack mount kit that is used to install up to three Crestron C2N-HBLOCK Cresnet distribution blocks or three CNPWS-75 Cresnet power supplies (or any combination thereof) into a 19-inch EIA equipment rack. Includes (1) black metal 2U rack mounting panel and (12) 6-32 device mounting screws.

Dimensions

Height: 3.5 in (8.89 cm)

Width: 19.0 in (48.26 cm)



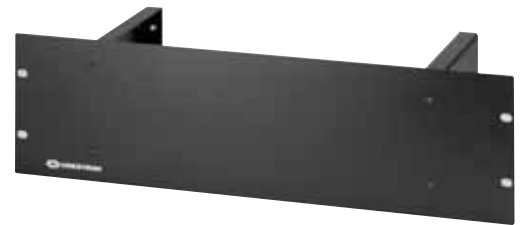
C2N-RMAK Rack Mount Kit for C2N-SPWS300 and C2N-NPA8

The C2N-RMAK is a 3-space 19-inch rack mount kit for the C2N-SPWS300 300 Watt Power Supply or C2N-NPA8 Network Poll Accelerator. Includes (1) black metal 3U rack mounting panel, (2) extension brackets, and additional device mounting hardware.

Dimensions

Height: 5.25 in (13.34 cm)

Width: 19.0 in (48.26 cm)



ST-RMK Rack Mount Kit for Control Modules and Tuners

The ST-RMK is a 1-space rack mount kit for all of Crestron's half-rack sized products including control modules, tuners, CNXHUB, CEN-TIA, and some QuickMedia modules. The ST-RMK provides hardware to mount a single device, or two side-by-side devices, in a single 19-inch EIA rack space. Includes (1) black metal rack mount tray, (1) half-space front filler plate and bracket, and additional device mounting hardware.

Dimensions

Height: 1.70 in (4.32 cm)

Width: 19.00 in (48.26 cm)

Depth: 5.02 in (12.74 cm)

Weight

2.4 lbs (1.1 kg)



EXPANSION CARD CAGE

CAGE2 3-Slot Y-Bus Expansion Cage for AV2 Control System

The CAGE2 is a field-installable accessory that adds (3) Y-Bus expansion slots to the AV2 control system. The CAGE2 enables installation of up to three Y-Bus control cards to expand the number and types of control ports in the AV2 chassis.

SPECIFICATIONS

Connectors

Expansion Slots: (3) 62-pin connectors

Y-Bus expansion slots

Accept all Y-Bus control cards

AV2: (1) 50-pin connector

Connects to the AV2 processor board

Dimensions

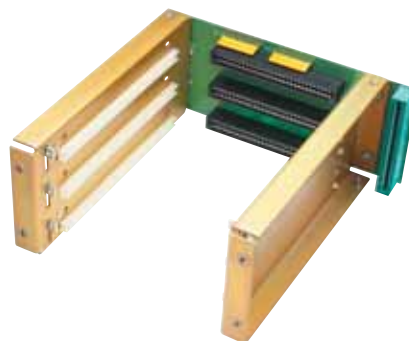
Height: 3.00 in (7.62 cm)

Width: 6.60 in (16.77 cm)

Depth: 7.12 in (18.08 cm)

Weight

0.73 lb (0.36 kg)



SERIAL CABLES AND IR PROBES

CNSP-XX Custom Serial Interface Cable

The CNSP-XX is an interface cable for connection of any controllable third-party device to a DB9M type Crestron COM port. Contact Crestron for exact models and configurations.

SPECIFICATIONS

Connectors

- (1) DB9 male for connection to a Crestron COM port
- (1) To be determined based upon the actual requirements of the controlled device

Length

15.0 ft (4.57 m)

ST-XX Custom Serial Interface Cable

The ST-XX is an interface cable for connection of any controllable third-party device to an RJ11 type Crestron COM port. Contact Crestron for exact models and configurations.

SPECIFICATIONS

Connectors

- (1) 6-pin RJ11 male for connection to a RJ11 type Crestron COM port
- (1) To be determined based upon the actual requirements of the controlled device

Length

15.0 ft (4.57 m)

SERIAL CABLES AND IR PROBES

STCP-501 DB9M to RJ11 Adapter

The STCP-501 is an adaptor allowing for the connection of a DB9-equipped RS-232 cable to an RJ-11 type Crestron Com port.

SPECIFICATIONS

Connectors

(1) 6-pin RJ11 male for connection to a RJ11 type Crestron COM port

(1) DB9 male for connection from any DB9 equipped RS-232 cable

Length

1.0 ft (30.5 cm)

CNSP-112 2-pin to Mini-phone Cable

The CNSP-112 is an interface cable designed for connecting a 1-way serial controllable device to a 2-pin terminal block type Crestron IR/Serial control port. Use this cable for products utilizing the Sony® Control-S protocol, or anywhere a passive 2-pin to mini-phone cable is required.

SPECIFICATIONS

Connectors

(1) 3.5 mm plug for connection to a Sony Control-S control port

(1) 2-pin 3.5mm detachable terminal block for connection to a Crestron IR port

Length

15.0 ft (4.57 m)

SERIAL CABLES AND IR PROBES

ST-112 Mini-phone to Mini-phone Cable

The ST-112 is an interface cable for connection of a Sony Control-S controllable device to a mini-phone type Crestron IR port.

SPECIFICATIONS

Connectors

(2) 3.5 mm plugs for connection between a Sony Control-S control port and any mini-phone type Crestron IR port

Length

15.0 ft (4.57 m)

IRP2 IR Emitter Probe

The IRP2 is an IR (infrared) emitter probe designed to adhere directly over the IR sensor window of a television, DVD player, or any other IR controllable device. The IRP2 connects to any Crestron control system with a 2-pin terminal block type Crestron IR port, providing a 1-way IR control interface to the device. The IRP2 is composed of an infrared LED housed in a miniature shell. Its integral 7 foot cable may be extended up to 1000 feet using ordinary twisted pair cable. Includes IR mask and two-sided tape for mounting.



SPECIFICATIONS

Connectors

(1) 2-pin 3.5mm detachable terminal block for connection to a Crestron IR port

Enclosure

Black injection molded plastic with integral lightweight cable

Dimensions

Height: 0.25 in (0.64 cm)

Width: 0.31 in (0.79 cm)

Depth: 0.56 in (1.43 cm)

Cable Length

Mini-wire Lead: 3 ft (0.91 m) long

Cable: 7.0 ft (2.13 m) long

SERIAL CABLES AND IR PROBES

STIRP IR Emitter Probe

The STIRP is an IR (infrared) emitter probe designed to adhere directly over the IR sensor window of a television, DVD player, or any other IR controllable device. The STIRP connects to any Crestron control system or room solution box equipped with a mini-phone type Crestron IR port, providing a 1-way IR control interface to the device. The STIRP is composed of an infrared LED housed in a miniature shell. Its integral 7 foot cable may be extended up to 1000 feet using ordinary twisted pair cable. Includes IR mask and two-sided tape for mounting.



SPECIFICATIONS

Connectors

(1) 3.5 mm mini-phone plug for connection to any mini-phone type Crestron IR port

Enclosure

Black injection molded plastic with integral lightweight cable

Dimensions

Height: 0.25 in (0.64 cm)

Width: 0.31 in (0.79 cm)

Depth: 0.56 in (1.43 cm)

Cable Length

Mini-wire Lead: 3 ft (0.91 m) long

Cable: 7.0 ft (2.13 m) long

SERIAL CABLES AND IR PROBES

ST-SPL IR Splitter

The ST-SPL splits one Crestron IR port into five, allowing control of up to five dissimilar devices via multiple STIRP infrared probes.

SPECIFICATIONS

Connectors

OUT: (5) 3.5 mm mini phone jacks

For connection of any combination of STIRP IR probes and ST-MB "Master Blaster" IR Sprayers

IN: (1) 3.5 mm mini phone jack

For connection to any mini-phone type Crestron IR port using 6 ft cable (included)

Power Requirements

Passive

Enclosure

Black metal, surface mount box with (2) integral mounting flanges

Dimensions

Height: 1.97 in (5.00 cm)

Width: 3.25 in (8.26 cm)

Depth: 1.16 in (2.95 cm)

Weight

0.35 lbs (0.15 kg) total



AVAILABLE ACCESSORIES

STIRP

IR emitter probe

CNSP-112

Interface cable for connection to a 2-pin terminal block type IR port

SERIAL CABLES AND IR PROBES

ST-MB “Master Blaster” IR Sprayer

The ST-MB emits an amplified infrared control signal in a wide “sprayer” pattern, allowing multiple IR-controllable devices within a single cabinet or small room to be controlled from a single IR OUT port. The ST-MB consists of two components, an interconnect box and an emitter assembly.

SPECIFICATIONS

Connectors (on Interconnect Box)

IR OUT: (1) 3.5 mm mini TRS phone jack
For connection to emitter assembly

IR IN: (1) 3.5 mm mini phone jack
For connection to any mini-phone type Crestron IR port using 6 ft cable (included)

PWR: (1) 2.5mm barrel DC power jack
12 Volt DC power input (PW-1205 power supply included)

LED Indicators

PWR: (Green) Indicates that 12 Volts DC power is supplied to the unit

IR-IN: (Red) Indicates that the unit is receiving an IR signal from the control system

Emitter LED: (Red, on emitter assembly) Indicates that the ST-MB is outputting an IR signal

Power Requirements

12VDC: 6 Watts (0.5 Amps) @ 12 Volts DC

Power Supply (PW-1205 included): 120 Volts AC, 60 Hz

Enclosure

Interconnect Box: Black metal, surface mount box with (2) integral mounting flanges

Emitter Assembly: Black metal and plastic face with 12 ft (3.66 m) hardwired cable and swivel base

Dimensions (Interconnect Box)

Height: 1.16 in (2.95 cm)

Width: 3.25 in (8.26 cm)

Depth: 1.97 in (5.00 cm)

Dimensions (Emitter Assembly)

Height: 1.05 in (2.67 cm)

Width: 1.13 in (2.86 cm)

Depth: 0.60 in (15.24 cm)

Weight

0.45 lbs (0.2 kg) total



INTERNATIONAL VERSION (230 VAC)

STI-MB

All the features and specifications of the ST-MB except:

Power Requirements

12VDC: 6 Watts (0.5 Amps) @ 12 Volts DC

Power Supply (PW-1210RU included): 230 Volts AC, 50 Hz

INCLUDED ACCESSORIES

PW-1205 (or PW-1210RU)

12 Volt Power Pack

AVAILABLE ACCESSORIES

CNSP-112

Interface cable for connection to a 2-pin terminal block type IR port

IR RECEIVER

CNXRMIRD IR Receiver

The CNXRMIRD is an optional infrared (IR) receiver designed for use with a control system or room solution box that includes an IR input port. The CNXRMIRD affords cost-effective control from any Crestron or third-party universal IR remote transmitting RC5 commands at 38 kHz.

SPECIFICATIONS

IR Wireless

IR Frequency: 38 kHz IR

Format: RC5

Range: Up to 50 ft line of sight (typical), dependent upon angle, obstructions, IR interference, and IR remote signal strength

Connectors

(1) Attached 6 ft (1.83 m) long cable with 3.5 mm mini phone plug (male) for connection to a Crestron IR IN port, extendable up to 500 feet;
(Not compatible with ST-SPL or ST-MB)

Environmental

Temperature: 41° to 104°F (5° to 40°C)

Humidity: 10% to 90% RH (non-condensing)

Enclosure

Black plastic cube

Dimensions

Height: 1.0 in (2.54 cm)

Width: 1.0 in (2.54 cm)

Depth: 1.0 in (2.54 cm)

Weight

2.4 oz (68.0 g) without cable



RF ANTENNA

CNANT High-Performance Extension Antenna

The CNANT is a high performance indoor antenna designed to surpass the performance of the standard antenna supplied with Crestron 1-way RF gateways such as the CNRFGWA, CNRFGWA-418, and MC2W. Its ground plane design and omni-directional reception pattern afford extended range in all directions. The CNANT may be mounted anywhere indoors within fifteen feet of the gateway, or up to fifty feet using a longer cable (not included).

SPECIFICATIONS

RF Performance

Frequency Range: 400 – 440 MHz

Gain: Unity

Reception Pattern: Omnidirectional

Connectors

Antenna: (1) BNC female

15 ft (4.57 m) BNC cable included

Impedance: 50 ohms

Dimensions

Height: 21.5 in (54.61 cm)

Width: 13.5 in (34.29 cm)

Depth: 13.5 in (34.29 cm)

Weight

0.51 lb (1.12 kg) without cable



CNXLIR IR/Serial Learner



INTERNATIONAL VERSION (230 VAC)

CNXLIRI

All the features and specifications of the CNXLIR except:

Power Requirements

12VDC: 6 Watts (0.5 Amps) @ 12 Volts DC

Power Supply (PW-1210RU included): 230 Volts AC, 50 Hz

INCLUDED ACCESSORIES

PW-1205 (or PW-1210RU)

12 Volt Power Pack

The CNXLIR is an IR/Serial Learner used to “learn” the IR and serial codes that control a piece of equipment and store them to the User Database for use in programming a Crestron system. It is used in conjunction with Crestron’s DEAL (Driver Editor and Learner) for Windows® software.

SPECIFICATIONS

Connectors

COMPUTER: (1) DB9 female, RS-232 connection to PC

IR OUT: (1) 3.5 mm mini-phone jack

Connects to STIRP probe (included) for testing of “learned” codes

12VDC: (1) 2.5mm barrel DC power jack

12 Volt DC power input (PW-1205 power supply included)

LED Indicators

PWR: Indicates 12 Volts DC power supplied to unit

IR OUT: Indicates activity on the IR out port of the unit

RDY: Indicates unit is waiting for IR signal

SGNL: Indicates unit is learning the signal

CMPLT: Indicates learning process is complete

OVRDRV: Indicates signal is too strong and cannot be accepted

Power Requirements

12VDC: 6 Watts (0.5 Amps) @ 12 Volts DC

Power Supply (PW-1205 included): 120 Volts AC, 60 Hz

Enclosure

Black metal, tabletop

Dimensions

Height: 1.80 in (4.57 cm), 1.70 in (4.32 cm) without feet

Width: 7.07 in (17.95 cm)

Depth: 6.32 in (16.06 cm)

Weight

2.0 lbs (0.91 kg)